



17
A-1



WILSON AND BONAPARTE.

AMERICAN ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF THE

BIRDS OF THE UNITED STATES.

Illustrated with Plates

ENGRAVED AND COLORED FROM ORIGINAL DRAWINGS FROM NATURE.

BY

ALEXANDER WILSON

AND

CHARLES LUCIAN BONAPARTE.

With a Sketch of the Life of Wilson,

By GEORGE ORD, F.L.S.,

AND

A CLASSIFICATION OF THE GENERA AND SPECIES OF AMERICAN BIRDS,

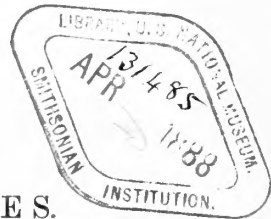
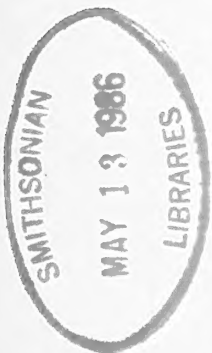
By SPENCER F. BAIRD, OF THE SMITHSONIAN INSTITUTION.

Deposit of S. F. BAIRD.

VOL. I.

PHILADELPHIA:

PORTER & COATES.





CAXTON PRESS OF
SHERMAN & CO., PHILADELPHIA.

STEREOTYPED BY MEARS & DUSENBERRY.

(v)

	PAGE
<i>Strix brachyotos</i> , Short-eared Owl,	93
<i>Virginiana</i> , Great-horned Owl,	94
<i>otus</i> , Long-eared Owl,	97
<i>nævia</i> , Mottled Owl,	99
<i>asio</i> , Red Owl,	101
<i>Lanius excubitor</i> , Great American Shrike or Butcher-bird,	102
<i>Carolinensis</i> , Loggerhead Shrike,	107
<i>Psittacus Carolinensis</i> , Carolina Parrot,	108
<i>Corvus corax</i> , Raven,	116
<i>corone</i> , Crow,	121
<i>Columbianus</i> , Clark's Crow,	128
<i>ossifragus</i> , Fish Crow,	129
<i>pica</i> , Magpie,	131
<i>cristatus</i> , Blue Jay,	134
<i>Canadensis</i> , Canada Jay,	140
<i>Oriolus Baltimorus</i> , Baltimore Oriole, male,	142
female,	146
<i>mutatus</i> , Orchard Oriole,	147
<i>Gracula ferruginea</i> , Rusty Grackle,	154
<i>quiscalá</i> , Purple Grackle,	156
<i>Cuculus Carolinensis</i> , Yellow-billed Cuckoo,	160
<i>erythrophthalmus</i> , Black-billed Cuckoo,	162
<i>Picus principalis</i> , Ivory-billed Woodpecker,	163
<i>pileatus</i> , Pilcated Woodpecker,	167
<i>auratus</i> , Golden-winged Woodpecker,	169
<i>erythrocephalus</i> , Red-headed Woodpecker,	175
<i>varius</i> , Yellow-bellied Woodpecker,	179
<i>villosus</i> , Hairy Woodpecker,	181
<i>pubescens</i> , Downy Woodpecker,	183
<i>querulus</i> , Red-cockaded Woodpecker,	187
<i>torquatus</i> , Lewis's Woodpecker,	188
<i>Carolinus</i> , Red-bellied Woodpecker,	189
<i>Sitta Carolinensis</i> , White-breasted Nuthatch,	191
<i> varia</i> , Red-bellied Nuthatch,	194
<i>pusilla</i> , Brown-headed Nuthatch,	195
<i>Alcedo alcyon</i> , Belted Kingfisher,	197
<i>Certhia familiaris</i> , Brown Creeper,	199
<i>maculata</i> , Black and White Creeper,	202
<i>Carolinniana</i> , Great Carolina Wren,	203
<i>palustris</i> , Marsh Wren,	206
<i>Trochilus colubris</i> , Humming Bird,	208

EDITOR'S PREFACE.

IN preparing for the press this edition of Wilson's Ornithology, the editor has adhered to the original text, correcting only some erroneous references, and a few verbal inaccuracies, most of which were probably typographical errors.

Wilson, in his introduction, mentions its being desirable, that the birds should be arranged scientifically; and takes notice of the causes, that rendered it, at that time, impracticable. In fact, he was obliged to figure and describe his birds, nearly in the order in which he obtained them; and was, therefore, often compelled to place together those of the most dissimilar habits and characters, and to separate the male and female of the same species. In arranging them in proper order, the editor believes that he is merely accomplishing that, which the author himself would have done, had he lived to prepare another edition. That the value of the work is thus much enhanced, is too evident to require comment.

The classification of Latham having been adopted by Wilson, has been followed by the editor, not because he considers it the best, but for the reason just mentioned; and also because there has not been any arrangement, hitherto proposed, entirely free from objections. In the notes, however, the most important recent improvements in classification have been pointed out; the errors committed by Wilson, in consequence of his not being able to procure specimens for comparison, and books for reference, have been corrected; and additional synonymes given. For these improvements, the editor must acknowledge himself to be, in great measure, indebted to the "Observations on the Nomenclature of

Wilson's Ornithology, by Charles L. Bonaparte," in the Journal of the Academy of Natural Sciences of Philadelphia, Volumes III. and IV.; the "Synopsis of the Birds of the United States," by the same author, in the Annals of the Lyceum of Natural History of New York; but principally to George Ord, Esq., the friend and associate of Wilson, who has kindly afforded his valuable counsel and assistance, and has added some highly interesting notes.

Mr. Ord has likewise permitted the birds, contained in his supplementary volume, to be incorporated with, and his sketch of the life of Wilson to be prefixed to, the work.

The original plates, engraved under the eye of Wilson, are employed in this edition, after having been carefully examined and retouched by Mr. Alexander Lawson, by whom most of them were executed; and who as an engraver of objects of natural history, stands unrivalled.

The birds have been colored by skilful artists, from recent specimens, or from the beautiful preparations belonging to the Philadelphia Museum. The improvements made in the arts within the last few years, have removed many of the difficulties that Wilson encountered in this department; and it is therefore confidently believed that in the permanency, brilliancy and accuracy of the coloring, the plates of the present edition are, at least, not inferior to those of the original.

P R E F A C E
TO
T H E L I F E O F W I L S O N .

IN the preface to the first edition of this biographical sketch, the motives of the publication are stated, and the peculiar circumstances under which its author was placed, in respect to materials, are detailed; there is, therefore, no need of repeating them.

It has been thought proper to augment the volume, by a selection from the series of interesting letters, which were put into the writer's hands by some of Wilson's personal friends, who were anxious that these memorials should not be lost. It may be, perhaps, objected, that some of them are of too trifling a nature for publication; but let it be observed that they all, more or less, tend to throw light upon the employments, and peculiarities of character, of an individual of no every day occurrence; one of those to whose genius we would render homage, and the memory of whom we delight to cherish.

For the particulars of Wilson's early life, the writer has been indebted to a narrative, in manuscript, which was communicated to him by Mr. William Duncan. This information, coming from a nephew of Wilson's, and his confidential friend for many years, must be deemed authentic; and we have to regret that the plan and limits of our publication, did not allow us to make a freer use of what was so kindly placed at our disposal.

To Mr. Duncan, Mr. Miller, and Mr. Lawson, the writer owes many obligations, for the promptitude with which they intrusted to him their letters; and his acknowledgments are equally due to Colonel Robert Carr, who furnished him with the letters to the late William Bartram. The friendship which subsisted between Wilson and the latter was of the most exalted kind; and the warm expressions of confidence and regard which characterize these letters, will afford a proof of how much of the

writer's happiness was derived from this amiable intercourse. The reader's obligations to Colonel Carr will not be lessened, when it is stated, that the greater part of these interesting epistles were mislaid during the latter days of the venerable botanist to whom they were addressed; and that it was through the care of the above-mentioned gentleman they were rescued from oblivion.

It will be long ere the lovers of science will cease to deplore the event, which snatched from us one so eminently gifted for natural investigations, by his zeal, his industry, his activity, and his intelligence; one who, after a successful prosecution of his great undertaking through a series of eventful years, was deprived of his merited reward, at the moment when he was about putting the finishing hand to those labors, which have secured to him an imperishable renown. "The hand of death," says Pliny, "is ever, in my estimation, too severe, and too sudden, when it falls upon such as are employed in some immortal work. The sons of sensuality, who have no other views beyond the present hour, terminate with each day the whole purpose of their lives; but those who look forward to posterity, and endeavor to extend their memories to future generations by useful labors;—to such, death is always immature, as it still snatches them from amidst some unfinished design."

But although that Being, who so often frustrates human purposes, thought proper, in his wisdom, to terminate the "unfinished design" of our lamented friend, yet were his aspirations after an honorable distinction in society fully answered. The poor despised weaver of Paisley takes his rank among the writers of our country; and after ages shall look up to the Father of American Ornithology, and bless that Providence, which, by inscrutable ways, led him to the only spot, perhaps, of the civilized earth, where his extraordinary talents would be encouraged to develop themselves, and his estimable qualities of heart would be duly appreciated.

Wilson has proved to us what genius and industry can effect in despite of obstacles, which men of ordinary abilities would consider insurmountable. His example will not be disregarded; and his success will be productive of benefits, the extent of which cannot now be estimated.

SKETCH

OF

THE AUTHOR'S LIFE.

ALEXANDER WILSON was born in the town of Paisley, in the west of Scotland, on the sixth day of July, 1766. His father, who was also named Alexander, followed the distilling business; an humble occupation, which neither allowed him much time for the improvement of his mind, nor yielded him much more than the necessaries of life. He was illiterate and poor; and died on the 5th June, 1816, at the age of eighty-eight. His mother was a native of Jura, one of the Hebrides or Western Islands of Scotland. She is said to have been a woman of delicate health, but of good understanding, and passionately fond of Scotch music, a taste for which she early inculcated on her son, who, in his riper years, cultivated it as one of the principal amusements of his life. She died when Alexander was about ten years old, leaving him, and two sisters, to mourn their irreparable loss; a loss which her affectionate son never ceased to deplore, as it deprived him of his best friend; one who had fostered his infant mind, and who had looked forward, with fond expectation, to that day,

——“When, clad in sable gown, with solemn air,
“The walls of God’s own house should echo back his prayer:”

for it appears to have been her wish that he should be educated for the ministry.

At a school in Paisley, Wilson was taught the common rudiments of learning. But what proficiency he made, whether he was distinguished from his schoolmates or not, my memorials of his early life do not inform me. It appears that he was initiated in the elements of the Latin tongue; but having been removed from school at the age of twelve or thirteen, the amount of knowledge acquired could not have been great, and I have reason to believe that he never afterwards resumed the study. His early productions show that his English education had not only been greatly circumscribed, but very imperfect. He wrote, as all self-taught authors write, carelessly and incorrectly. His sen-

tences, constructed by the ear, often displease one by their gross violations of the rules of grammar, an essential part of learning to which he never seriously applied himself until, after his arrival in America, he found it necessary to qualify himself for an instructor of youth.

Wilson's father, feeling the want of a helper in the government of an infant family, again entered into the matrimonial state. The maiden name of this second wife was Brown.

It was the intention of the father that Alexander should be educated for a physician; but this design was not relished by the son, who had, through the impertinent interference of some persons, imbibed some prejudices against the profession, which were the cause of the project's being abandoned.

It being the wish of the step-mother that the boy should be put to a trade, he was accordingly apprenticed to his brother-in-law, William Duncan, who then resided in Paisley, to learn the art of weaving. That this determination was the result of good sense there can be no doubt; the employment had the tendency to fix a disposition somewhat impetuous and wavering; and the useful knowledge acquired thereby he was enabled, at a subsequent period of life, to turn to account, when mental exertion, even with superior resources, would have availed him but little.

The scheme of being taught a trade met with little or no opposition from the subject of this memoir; his father's house no longer affording him that pleasure which it had done during the life of her who had given him existence. Some difference had arisen between him and his step-mother, whether from undutiful conduct of his, or harsh treatment of hers, I know not; but it may be asserted with truth, that she continued an object of his aversion through life: which was manifest from the circumstance that, in the many letters which he wrote from America to his father, he seldom, if ever, mentioned her name. She is still living, and must, doubtless, feel not a little *rejoiced* that her predictions with respect to the "*lazy weaver*," as *Sandy* was termed at home, who, instead of minding his business, misspent his time in making verses, were never verified. But, in justice to her character, we must state that, if she was an unkind step-mother, she nevertheless proved herself to be a faithful and affectionate wife; and supported by her industry, her husband, when he became by age and infirmities, incapable of labor.

At an early period of his life Wilson evinced a strong desire for learning; and this was encouraged by a spirit of emulation which prevailed among his youthful acquaintance, who, like himself, happily devoted many of their vacant hours to literary pursuits. He had free access to a collection of magazines and essays, which, by some good luck, his father had become possessed of; and these, as he himself often asserted, "were the first books that gave him a fondness for reading and reflection." This remarkable instance of the beneficial tendency of periodical publications we record with pleasure; and it may be adduced as an argument in favor of affording patronage, in our young country, to a species of literature so well adapted to the leisure of a commercial people; and which, since the days of Addison, has had so powerful an influence on the taste and morals of the British nation.

Caledonia is fruitful of versemen: every village has its poets; and so preva-

lent is the habit of jingling rhymes, that a scholar is considered as possessing no taste, if he do not attune the Scottish lyre to those themes which the *amor patriæ*, the national pride of a Scotsman, has identified with his very existence.

That poetry would attract the regard of Wilson was to be expected; it was the vehicle of sentiments which were in unison with his sanguine temperament; he had early imbibed a love of virtue, and it now assumed a romantic cast by assimilation with the high-wrought efforts of fancy, combined with the melody of song.

After an apprenticeship of about five years, Wilson became his own master; and, relinquishing the occupation of weaving, he resolved to gratify his taste for rural scenery, by journeying into the interior of the country in the capacity of a peddler. He was now about eighteen, full of ardor and vivacity; had a constitution capable of great exertion; and a mind which promised resources amid every difficulty. Having been initiated in the art of trading, he shouldered his pack, and cheerfully set out in quest of riches. In a mind of a romantic turn, Scotland affords situations abundantly calculated to arouse all those associations which the sublime and beautiful in nature inspire. Wilson was an enthusiast; and the charms of those mountains, valleys, and streams, which had been immortalized in song, filled his soul with rapture, and incited some of the earliest efforts of his youthful muse.

To him who would accumulate wealth by trade, the Muses must not be propitious. That abstraction of mind from worldly concerns which letters require, but ill qualifies one to descend to those arts, which, in order to be successfully practised, must be the unceasing objects of solicitude and attention. While the trader was feasting his eyes upon the beauties of a landscape, or inditing an elegy or a song, the auspicious moment to drive a bargain was neglected, or some more fortunate rival was allowed to supplant him. From the habit of surveying the works of nature arose an indifference to the employment of trading, which became more disgusting at each interview with the Muses; and nothing but the dread of poverty induced him to conform to the vulgar avocations of common life.

Burns was now the favorite of the public; and from the unexampled success of this humble son of genius many aspired to the honors of the laurel, who otherwise would have confined their views of renown to the limited circle of their family or acquaintance. Among this number may be reckoned our Wilson; who, believing that he possessed the talent of poetical expression, ventured to exhibit his essays to his friends, whose approbation encouraged him to renewed perseverance, in the hope of emerging from that condition in society which his aspiring soul could not but disdain.

In consequence of his literary attainments and correct moral deportment, he was admitted to the society of several gentlemen of talents and respectability, who deserved in our youth the promise of eminence. Flattered by attentions, which are always grateful to the ingenuous mind, he was emboldened to the purpose of collecting and publishing his poetical attempts, hoping thereby to secure funds sufficient to enable him to persevere in the walks of learning, which, to his glowing fancy, appeared to be strewn with flowers.

In pursuance of this design he printed proposals; and being "resolved," to adopt his own language, "to make one bold push for the united interests of Pack and Poems," he once more set out to sell his merchandise, and obtain patronage to his work.

This expedition was unprofitable: he neither advanced his fortune nor received the encouragement of many subscriptions. Fortunate would it have been for him if, instead of giving vent to his spleen at the supposed want of discernment of rising merit, or lack of taste for the effusions of genius, he had permitted himself to be admonished of his imprudence by the indifference of the public, and had taken that for an act of friendship which his wounded feelings did not fail to construe into contempt.

But in defiance of discouragement he published his volume, under the title of "Poems, Humorous, Satirical and Serious." The writer of this sketch has it now before him; and finds in it the following remarks, in the handwriting of the author himself: "I published these poems when only twenty-two—an age more abundant in *sail* than *ballast*. Reader, let this soften the rigor of criticism a little." Dated, "Gray's Ferry, July 6th, 1804." These poems were, in truth, the productions of a boy, who composed them under the most disadvantageous circumstances. They answered the purpose for which they were originally intended—to gratify the partiality of friendship, and alleviate moments of solitude and despondency. Their author, in his riper years, lamented his rashness in giving them to the world; and it is to be hoped that no one will be so officious as to draw them from that obscurity to which he himself sincerely rejoiced to see them condemned. They went through two small editions in octavo, the last of which appeared in 1791. The author reaped no benefit from the publication.

Mortified at the ill success of his literary undertaking, and probably with the view of withdrawing himself from associates who, instead of advancing, rather tended to retard his studies, Wilson retired to the little village of Lochwinnoch, situated in a delightful valley, a few miles from Paisley. In this sequestered place he had before resided, and he now resorted to it under the pressure of disappointment, and soothed his mind with the employment of letters, and spent his vacant hours amid the romantic scenery of a country which was well calculated to captivate one who had devoted himself to the service of the muses.

While residing at Lochwinnoch he contributed some short prose essays to *The Bee*, a periodical work which was published at Edinburgh by Dr. Anderson. Of the merits of these essays I cannot speak, as I have never seen them. He also occasionally visited the latter place, to frequent the Pantheon, wherein a society for debate held their meetings. In this assembly of minor wits he delivered several poetical discourses, which obtained him considerable applause. The particulars of these literary peregrinations have been minutely related to me; but at this time I will merely state, that he always performed his journeys on foot, and that his ardor to obtain distinction drawing him away from his profession, the only means of procuring subsistence, he was frequently reduced to the want of the necessaries of life.

Wilson, in common with many, was desirous of becoming personally

acquainted with the poet Burns, who was now in the zenith of his glory; and an accidental circumstance brought them together. The interview appeared to be pleasing to both; and they parted with the intention of continuing their acquaintance by a correspondence. But this design, though happily begun, was frustrated by an imprudent act of the former, who, in a criticism on the tale of Tam O'Shanter, remarked of a certain passage that there was "too much of the *brute*" in it. The paragraph alluded to is that which begins thus:

"Now, Tam, O Tam! had thae been queans."

Burns, in reply, observed: "If ever you write again to so irritable a creature as a poet, I beg you will use a gentler epithet than to say there is 'too much of the *brute*' in anything he says or does." Here the correspondence closed.

From Lochwinnoch Wilson returned to Paisley, and again sought subsistence by mechanical labor. But at this period the result of the French Revolution had become evident by the wars enkindled on the continent; and their influence on the manufactures of Great Britain, particularly those of Paisley, began to be felt. Revolution principles had also crept in among the artisans, which, superadded to the decline of business, were the means of many being thrown out of stated employment; and the distress of others was not a little aggravated by exactions which, it was supposed, neither policy nor justice ought to have dictated. Hence arose a misunderstanding between the manufacturers and the weavers, which soon grew into a controversy, that awakened the zeal of both parties; and Wilson, incited by principle as well as interest, remained not idle on an occasion which seemed to demand the exercise of his talents for the benefit of the poor and the oppressed.

Among the manufacturers there was one of considerable wealth and influence, who had risen from a low origin by a concurrence of fortunate circumstances, and who had rendered himself greatly conspicuous by his avarice and knavery. This obnoxious individual was arraigned in a galling satire, written in the Scottish dialect, which is well known to be fertile of terms of sarcasm or reproach. The piece was published anonymously; and, being suited to the taste of the multitude, was read with eagerness. But the subject of it, stung to the quick by the severity of the censure, sought revenge of his concealed enemy, who, through some unforeseen occurrence, was revealed in the person of Wilson. A prosecution for a libel was the consequence of the disclosure; and our satirist was sentenced to a short imprisonment, and to burn, with his own hands, the poem at the public cross in the town of Paisley. Wilson underwent the sentence of the law surrounded by his friends, a gallant and numerous band, who viewed him as a martyr to the cause of honor and truth; and who, while his character was exalted in their opinion, failed not to stigmatize that of his adversary in all the bitterness of contempt. The printer, it is said, was fined for his share in the publication.

In the year 1792, Wilson wrote his characteristic tale of "Watty and Meg," the last poem which he composed in Scotland. It was published without a name; and, possessing considerable merit, was, by many, attributed to Burns. This ascription certainly showed a want of discrimination, as this production displays none of those felicities of diction, none of that peculiar intermixture

of pathos and humor, which are so conspicuous in the writings of Burns. It has obtained more popularity in Scotland than any of the minor essays of our author; and has been ranked with the best productions of the Scottish muse.

Cromek, in his sketch of Wilson's life, adverting to the prosecution above mentioned, says, that "the remembrance of this misfortune dwelt upon his mind, and rendered him dissatisfied with his country. Another cause of Wilson's dejection was the rising fame of Burns, and the indifference of the public to his own productions. He may be said to have envied the Ayrshire bard, and to this envy may be attributed his best production, 'Watty and Meg,' which he wrote at Edinburgh in 1793 (1792). He sent it to Nielson, printer, at Paisley, who had suffered by the publication of his former poems. As it was, by the advice of his friends, published anonymously, it was generally ascribed to Burns, and went rapidly through seven or eight editions. Wilson, however, shared no part of the profits, willing to compensate for the former losses his publisher had sustained."*

The sketch above mentioned the author of this narrative showed to Wilson, and the latter told him that the relation was wanting in correctness. He pointedly denied the charge of envying the Ayrshire bard, and felt not a little scandalized at the unworthy imputation. He added, that no one entertained a more exalted idea of Burns's genius, or rejoiced more at his merited success, than himself.

Wilson now began to be dissatisfied with his lot. He was poor, and had no prospect of bettering his condition in his native country. Having heard flattering accounts of America, he conceived the design of emigrating thither, and settling in the United States.

It was some time in the latter part of the year 1793 that the resolution was formed of forsaking the land of his forefathers. His eye having been accidentally directed to a newspaper advertisement, which stated that the American ship *Swift* would sail from the port of Belfast, in Ireland, on the first of May following, with passengers for Philadelphia, he communicated his scheme, in confidence, to his nephew, William Duncan, then a lad of sixteen, who consented to become his fellow-traveller in the voyage; and an agreement was entered into of departing in the above-mentioned ship.

The next subject of consideration was the procuring of funds; and as weaving presented the most eligible plan for this purpose, to the loom Wilson applied himself, for four months, with a diligence and economy almost surpassing belief; the whole of his expenses during this period amounting to less than one shilling per week.

All matters being finally arranged, he set out on foot for Port Patrick, whence he embarked for Ireland. On reaching Belfast it was found that the ship had her complement of passengers; but, rather than remain after so much exertion, Wilson and his companion consented to sleep upon deck, and, consequently, they were permitted to depart in the ship, which sailed about the middle of May, and arrived at Newcastle, in the state of Delaware, on the fourteenth of July, 1794.

* Cromek's "Select Scottish Songs," vol. 2, p. 214. London, 1810.

We now behold Alexander Wilson in a strange land, without an acquaintance on whose counsels and hospitality he could rely in that state of uncertainty to which, having no particular object in view, he was of course subjected; without a single letter of introduction, and with not a shilling in his pocket.* But every care was forgotten in his transport at finding himself in the land of freedom. He had often cast a wishful look towards the western hemisphere, and his warm fancy had suggested the idea that among that people, only, who maintained the doctrine of an equality of rights, could political justice be found. He had become indignant at beholding the influence of the wealthy converted into the means of oppression; and had imputed the wrongs and sufferings of the poor, not to the condition of society, but to the nature and constitution of the government. He was now free; and exulted in his release, as a bird rejoices which escapes from the confinement of the cage. Impatient to set his foot upon the soil of the New World, he landed at the town of Newcastle, and, shouldering his fowling-piece, he directed his steps towards Philadelphia, distant about thirty-three miles. The writer of this biography has a distinct recollection of a conversation with Wilson on this part of his history, wherein he described his sensations on viewing the first bird that presented itself as he entered the forests of Delaware; it was a red-headed woodpecker, which he shot, and considered the most beautiful bird he had ever beheld.

On his arrival at Philadelphia, he deliberated upon the most eligible mode of obtaining a livelihood, to which the state of his funds urged immediate attention. He made himself known to a countryman of his, Mr. John Aitken, a copper-plate printer, who, on being informed of his destitute situation, gave him employment at this business, at which he continued for a few weeks, but abandoned it for his trade of weaving; having made an engagement with Mr. Joshua Sullivan, who resided on the Pennypack creek, about ten miles north of Philadelphia.

The confinement of the loom did not agree either with Wilson's habits or inclinations; and learning that there was considerable encouragement afforded to settlers in Virginia, he immigrated thither, and took up his residence near Shepherd's Town, in that part of the state known by the name of New Virginia.† Here he again found himself necessitated to engage in the same

* This is literally true. The money which bore his expenses from Newcastle to Philadelphia was borrowed of a fellow passenger. The same generous friend, whose name was Oliver, made him subsequently a loan of cash to enable him to travel into Virginia.

† The habits of the people with whom Wilson was compelled to associate, in this section of the state, it should seem gave him no satisfaction; and the life he led added not a little to the chagrin which he suffered on finding himself an alien to those social pleasures which, hitherto, had tended to sweeten his existence. His letters at this period would, no doubt, afford some curious particulars, illustrative of his varied life; but none of them have fallen into my hands. The following extract from some of his manuscript verses, will lead to the conclusion that he did not quit Virginia with regret:

“Farewell to Virginia, to Berkley adieu,
Where, like Jacob, our days have been evil and few!
So few—they seemed really but one lengthened curse;
And so bad—that the Devil only could have sent worse.”

sedentary occupation ; and soon becoming disgusted with the place, he returned to the mansion of his friend, Mr. Sullivan.

I find from one of his journals that, in the autumn of the year 1795, he travelled through the north part of the state of New Jersey, with an acquaintance, in the capacity of a pedler, and met with tolerable success.

His diary of this journey is interesting. It was written with so much care, that one is tempted to conjecture that he spent more time in literary occupation than in vending his merchandise. It contains observations on the manners of the people, and remarks on the principal natural productions of New Jersey, with sketches of the most noted indigenous quadrupeds and birds. In these sketches one is enabled to perceive the dawning of that talent for description which was afterwards revealed with so much lustre.

On his return from this trading adventure, he opened a school on the Oxford road, about five miles to the north of Frankford, Pennsylvania ; but being dissatisfied with this situation, he removed to Milestown, and taught in the school-house of that village. In this latter place he continued for several years, and, being deficient in the various branches of learning necessary to qualify him for an instructor of youth, he applied himself to study with great diligence ; and acquired all his knowledge of the mathematics, which was considerable, solely by his own exertions. To teaching he superadded the vocation of surveying, and was occasionally employed by the neighboring farmers in this business.

Whilst residing at Milestown, he made a journey, on foot, to the Genesee country, in the state of New York, for the purpose of visiting his nephew, Mr. William Duncan, who resided upon a small farm, which was their joint property. This farm they had been enabled to purchase through the assistance of Mr. Sullivan, the gentleman in whose employ Wilson had been, as before stated. The object of this purchase, which some might deem an act of imprudence in those whose slender funds did not suffice without the aid of a loan, was to procure an asylum for Mr. Duncan's mother and her family of small children, whom poverty and misfortune had, a short time before, driven to this country. This was somewhat a fatiguing journey to a pedestrian, who, in the space of twenty-eight days, travelled nearly eight hundred miles.

The life of Wilson now becomes interesting, as we are enabled, by a selection from his letters, to present him to the reader as his own biographer.

TO MR. WILLIAM DUNCAN.*

MILESTOWN, July 1, 1800.

"DEAR BILL

"I had the pleasure of yours by the hands of Mr. P. this day, and about four weeks ago I had another, directed to Mr. Dobson's care, both of which were as welcome to me as anything, but your own self, could be. I am just as you left me, only my school has been thinner this season than formerly.

* Mr. Duncan at this time resided upon the farm mentioned above, which was situated in the township of Ovid, Cayuga county, New York.

"I have had four letters from home, all of which I have answered. Their news are—Dull trade—provisions most exorbitantly high—R.'s sister dead—the Seedhills mill burnt to the ground—and some other things of less consequence.

* * * * *

"I doubt much if stills could be got up in time to do anything at the distilling business this winter. Perhaps it might be a safer way to take them up, in the spring, by the Susquehanna. But if you are determined, and think that we should engage in the business, I shall be able to send them up either way. P. tells me that his two stills cost about forty pounds. I want to hear more decisively from you before I determine. Sooner than live in a country exposed to the ague, I would remain where I am.

"O. comes out to stay with me two months, to learn surveying, algebra, &c. I have been employed in several places about this summer to survey, and have acquitted myself with credit and to my own satisfaction. I should not be afraid to engage in any job with the instruments I have. * *

"S. continues to increase in bulk, money and respectability; a continual current of *elevenpenny bits* pouring in, and but few running out. * *

"We are very anxious to hear how you got up; and well pleased that you played the Horse Jockey so luckily. If you are fixed in the design of distilling, you will write me, by the first opportunity, before winter sets in, so that I may arrange matters in time.

"I have got the schoolhouse enlarged, by contributions among the neighbors. In summer the school is, in reality, not much; but in winter I shall be able to teach with both pleasure and profit.

* * * * *

"When I told R. of his sister's death, 'I expected so,' said Jamie, 'any other news that's curious?' So completely does long absence blunt the strongest feelings of affection and friendship. May it never be so with you and me, if we should never meet again. On my part it is impossible, except God, in his wrath, should deprive me of my present soul, and animate me with some other."

Wilson next changed his residence for one in the village of Bloomfield, New Jersey, where he again opened a school. But being advised of a more agreeable and lucrative situation, he solicited, and received, an engagement from the trustees of Union School, situated in the township of Kingsess or Kingessing, a short distance from Gray's Ferry, on the river Schuylkill, and about four miles from Philadelphia.

This removal constituted an important era in the life of Wilson. His school-house and residence being but a short distance from Bartram's Botanic Garden, situated on the western bank of the Schuylkill,—a sequestered spot, possessing attractions of no ordinary kind,—an acquaintance was soon contracted with that venerable naturalist, Mr. William Bartram,* which grew into

* The author of "Travels through North and South Carolina, Georgia, East and West Florida," &c. This excellent gentleman closed his long and useful life on the 22d July, 1823, in the eighty-fourth year of his age.

an uncommon friendship, and continued without the least abatement until severed by death. Here it was that Wilson found himself translated, if we may so speak, into a new existence. He had long been a lover of the works of Nature, and had derived more happiness from the contemplation of her simple beauties than from any other source of gratification. But he had hitherto been a mere novice; he was now about to receive instructions from one whom the experience of a long life, spent in travel and rural retirement, had rendered qualified to teach. Mr. Bartram soon perceived the bent of his friend's mind, and its congeniality to his own; and took every pains to encourage him in a study which, while it expands the faculties, and purifies the heart, insensibly leads to the contemplation of the glorious Author of Nature himself. From his youth Wilson had been an observer of the manners of birds; and, since his arrival in America, he had found them objects of uncommon interest; but he had not yet viewed them with the eye of a naturalist.

Mr. Bartram possessed some works on natural history, particularly those of Catesby and Edwards. Wilson perused them attentively; and found himself enabled, even with *his* slender stock of information, to detect errors and absurdities into which these authors had fallen from a defective mode of studying Nature: a mode which, while it led them to the repositories of dried skins and preparations and to a reliance on hearsay evidence, subjected them to the imputation of ignorance, which their lives, devoted to the cultivation and promotion of science, certainly would not justify. Wilson's improvement was now rapid; and the judicious criticisms which he made on the above-mentioned authors gratified his friend and instructor, who redoubled his encouraging assistance, in order to further him in a pursuit for which his genius, now beginning to develop itself, was evidently fitted.

“TO MR. WILLIAM DUNCAN.

“GRAY'S FERRY, October 30th, 1802.

“DEAR BILLY.

“I was favored with your despatches a few hours ago, through the kindness of Colonel Sullivan, who called on me for that purpose. I have read and re-read, over and over again, their contents; and shall devote the remainder of this evening to reply to you, and the rest of the family, now joint tenants of the woods. By the arrival of John F. here, in August last, I received one letter from my brother David, one from Thomas W. and one for Alexander from David Wilson; and last week another packet arrived from Belfast, containing one letter from your father to myself; and to your mother, brother and brother-in-law, and yourself, one each, all of which I have herewith sent, and hope they may amuse a leisure hour. F. has been wofully disappointed in the expectations he had formed of his uncle. Instead of being able to assist him, he found him in the depth of poverty; and fast sinking under a severe fever; probably the arrival of a relation contributed to his recovery; he is now able to crawl about. F. has had one child born and buried since his arrival. He weaves with Robertson, but neither likes the situation nor employment. He is a stout, active and ingenious fellow, can turn his hand to almost anything, and wishes as eagerly to get up to the lakes as ever a saint

longed to get to heaven. He gives a most dismal description of the situation of the poor people of Scotland in 1800.

"Your letters, so long expected, have at length relieved me from much anxiety. I am very sorry that your accommodations are so few, for my sister's sake, and the children's; a fireplace and comfortable house for the winter must, if possible, be got up without delay. If masons are not to be had, I would attempt to raise a temporary one myself, I mean a fireplace—but surely they may be had, and lime and stones are also attainable by dint of industry. These observations are made not from any doubts of your doing everything in your power to make your mother as comfortable as possible, and as your means will enable you, but from a solicitude for a sister's health, who has sustained more distress than usual. I know the rude appearance of the country, and the want of many usual conveniences, will for some time affect her spirits; let it be your pleasure and study to banish these melancholy moments from her as much as possible. Whatever inconveniences they may for a while experience, it was well they left this devoted city. The fever, that yellow genius of destruction, has sent many poor mortals to their long homes since you departed; and the gentleman who officiates as steward to the hospital informed me yesterday evening that it rages worse this week than at any former period this season, though the physicians have ceased reporting. Every kind of business has been at a stand these three months, but the business of death.

"You intimate your design of coming down next spring. Alexander seems to have the same intention. How this will be done, consistent with providing for the family, is not so clear to me. Let me give my counsel on the subject. You will see by your father's letters that he cannot be expected before next July or August perhaps, a time when you must of necessity be at home. Your coming down, considering loss of time and expenses, and calculating what you might do on the farm, or at the loom, or at other jobs, would not clear you more than twenty dollars difference, unless you intended to remain here five or six months, in which time much might be done by you and Alexander on the place. I am sorry he has been so soon discouraged with farming. Were my strength but equal to my spirit, I would abandon my school for ever for such an employment. Habit will reconcile him to all difficulties. It is more healthy, more independent and agreeable than to be cooped up in a subterranean dungeon, surrounded by gloomy damps, and breathing an unwholesome air from morning to night, shut out from Nature's fairest scenes and the pure air of heaven. When necessity demands such a seclusion, it is noble to obey; but when we are left to choice, who would bury themselves alive? It is only in winter that I would recommend the loom to both of you. In the month of March next I shall, if well, be able to command two hundred dollars cash *once more*. Nothing stands between me and this but health, and that I hope will continue at least till then. You may then direct as to the disposal of this money—I shall freely and cheerfully yield the whole to your management. Another quarter will enable me to settle John M.'s account, about the time it will be due; and, instead of wandering in search of employment five or six hundred miles for a few dollars, I would beg of you both to unite in putting the place and house in as good order as possible. But Alexander can

get nothing but wheat and butter for this *hagging* and *slashing*! Never mind, my dear namesake, put up awhile with the rough fare and rough clothing of the country. Let us only get the place in good order, and you shall be no loser by it. Next summer I will assuredly come up along with your father and George, if he comes as I expect he will, and everything shall flourish.

"My dear friend and nephew, I wish you could find a leisure hour in the evening to give the children, particularly Mary, some instruction in reading, and Alexander in writing and accounts. Don't be discouraged though they make but slow progress in both, but persevere a little every evening. I think you can hardly employ an hour at night to better purpose. And make James read every convenient opportunity. If I live to come up beside you, I shall take that burden off your shoulders. Be the constant friend and counsellor of your little colony, to assist them in their difficulties, encourage them in their despondencies, to make them as happy as circumstances will enable you. A mother, brothers and sisters, in a foreign country, looking up to you as their best friend and supporter, places you in a dignified point of view. The future remembrance of your kind duty to them now, will, in the hour of your own distress, be as a healing angel of peace to your mind. Do everything possible to make your house comfortable—fortify the garrison in every point—stop every crevice that may let in that chilling devil, the roaring blustering north-west—heap up fires big enough for an Indian war-feast—keep the flour-barrel full—bake loaves like Hamles Head*—make the loom thunder, and the pot boil; and your snug little cabin re-echo nothing but sounds of domestic felicity. I will write you the moment I hear of George. I shall do everything I have said to you, and never lose sight of the eighteenth of March; for which purpose I shall keep night-school this winter, and retain every farthing but what necessity requires—depend upon me. These are the outlines of *my* plan. If health stand it, all will be well; if not, we cannot help it. Ruminates on all this, and consult together. If you still think of coming down I hope you would not hesitate for a moment to make my neighborhood your home. If you come I shall be happy to have you once more beside me. If you resolve to stay on the farm, and put things in order as far as possible, I will think you have done what you thought best. But I forget that my paper is done.

"Robb, Orr, &c., have escaped as yet from the pestilence; but Robb's three children have all had the ague. Rabby Rowan has gone to *Davie's Locker* at last: he died in the West Indies. My brother David talks of coming to America, and my father, poor old man, would be happy to be with you, rough and uncomfortable as your situation at present is. As soon as I finish this I shall write to your mother and Alexander. There is a letter for John M., which he is requested to answer by his father-in-law. I hope John will set a firm resolute heart to the undertaking, and plant a posterity in that rich western country, to perpetuate his name for ever. Thousands here would rejoice to be in his situation. How happy may you live thus united together in a

* The name of a rock near Paisley.

free and plentiful country, after so many years of painful separation, where the bare necessities of life were all that incessant drudgery could procure, and even that but barely! Should even sickness visit you, which God forbid, each of you is surrounded by almost all the friends you have in the world, to nurse you, and pity and console you; and surely it is not the least sad comfort of a death-bed, to be attended by affectionate relatives. Write me positively by post, two or three times. My best love to my sister, to Isabella, Alexander, John, the two Maries, James, Jeany, little Annie. God Almighty bless you all.

"Your ever affectionate friend,

"ALEX. WILSON."

TO ALEXANDER DUNCAN.

"October 31st, 1802.

"DEAR ALEXANDER.

"I have laughed on every perusal of your letter. I have now deciphered the whole, except the blots, but I fancy they are only by the way of *half mourning* for your doleful captivity in the backwoods, where there is nothing but wheat and butter, eggs and gammon, for *hagging* down trees. Deplorable! what must be done? It is a good place, you say, for a man who has a parcel of *weans*!

"But forgive this joking. I thank you, most heartily, for this your *first letter* to me; and I hope you will follow it up with many more. I shall always reply to them with real pleasure. I am glad that your chief objection to the country is want of money. No place is without its inconveniences. Want of the necessities of life would be a much greater grievance. If you can, in your present situation, procure sufficient of these, though attended with particular disadvantages, I would recommend you to persevere where you are. I would wish you and William to give your joint labors to putting the place in as good order as possible. A farm of such land, in good cultivation, is highly valuable; it will repay all the labor bestowed upon it a hundred-fold; and contains within it all the powers of plenty and independence. These it only requires industry to bring forth, and a small stock of money to begin with. The money I doubt not of being able to procure, next summer, for a year or two, on interest, independent of two hundred dollars of my own, which I hope to possess on or before the middle of March next. C. S. is very much attached to both your brother and me; and has the means in his power to assist us—and I know he will. In the meantime, if you and William unite in the undertaking, I promise you as far as I am concerned, to make it the best plan you could pursue.

"Accustom yourself, as much as you can, to working out. Don't despise *hagging* down trees. It is hard work, no doubt; but taken moderately, it strengthens the whole sinews; and is a manly and independent employment. An old weaver is a poor, emaciated, helpless being, shivering over rotten yarn, and groaning over his empty flour barrel. An old farmer sits in his armchair before his jolly fire, while his joists are crowded with hung beef and gammons, and the bounties of heaven are pouring into his barns. Even the article of

health is a consideration sufficient to make a young man prefer the labors of the field: for health is certainly the first enjoyment of human life. But perhaps weaving holds out advantages that farming does not. Then blend the two together; weave in the depth of winter, and work out the rest of the year. We will have it in our power, before next winter, to have a shop, looms, &c., provided. Consider all I have said, and if I have a wrong view of the subject, form your own plans, and write me without delay."

TO MR. WILLIAM DUNCAN.

"GRAY'S FERRY, December 23d, 1802.

"The two Mr. Purdies popped into my school, this afternoon, as unexpected as they were welcome, with news from the promised land. I shall detain them with me all night, on purpose to have an opportunity of writing you a few lines. I am glad you are all well. I hope that this is the last devilish slough of despond which you will have to struggle in for some time. I will do all that I said to you, in my last, by the middle of March; so let care and sorrow be forgotten; and industry, hope, good humor and economy, be your bosom friends. * * * *

"I succeed tolerably well; and seem to gain in the esteem of the people about. I am glad of it, because I hope it will put it in my power to clear the road a little before you, and banish despondence from the heart of my dearest friend. Be assured that I will ever as cheerfully contribute to your relief in difficulties, as I will rejoice with you in prosperity. But we have nothing to fear. One hundred bushels of wheat, to be sure, is no great marketing; but has it not been expended in the support of a mother, and infant brothers and sisters, thrown upon your bounty in a foreign country? Robert Burns, when the mice nibbled away his corn, said:

" 'I'll get a blessin wi' the lave,
And never miss 't.' "

"Where he expected one, you may a thousand. Robin, by his own confession, ploughed up his mice out of *ha' and hame*. You have built for your little wanderers a *cozie bield*, where none dare molest them. There is more true greatness in the affectionate exertions which you have made for their subsistence and support, than the bloody catalogue of heroes can boast of. Your own heart will speak peace and satisfaction to you, to the last moment of your life, for every anxiety you have felt on their account. Colonel Sullivan talks with pride and affection of you.

"I wish Alexander had written me a few lines of the old German text. I laugh every time I look at his last letter: it's a perfect antidote against the spleen. Well, Alexander, which is the best *fun*, handling the shuttle, or the axe? When John M. comes down, write me largely. And, dear sister, let me hear from you also. * * * *

"I would beg leave to suggest to you the propriety of teaching the children to behave with good manners, and dutiful respect, to yourself, each other, and everybody.

"You must excuse me for anything I may have said amiss, or anything I may have omitted to mention. I am, with sincere attachment, your affectionate friend."

The foregoing letters place the character of Wilson in the most amiable point of view; and they entirely supersede any remarks which I might make upon those social affections that distinguished him through life.

In his new situation Wilson had many enjoyments; but he had likewise moments of despondency, which solitude tended to confirm. He had addicted himself to the writing of verses, and to music; and, being of a musing turn of mind, had given way to those seductive feelings, which the charming scenery of the country, in a sensible heart, never fails to awaken. This was a fatal bias, which all his efforts could not counteract or remove. His acquaintance perceived the danger of his state; and one in whose friendship he had placed strong reliance, and to whom he had freely unburthened himself, Mr. Lawson, the engraver, entertained apprehensions for the soundness of his intellect.* There was one subject which contributed not a little to increase his mental gloom, and this was the consideration of the life of penury and dependence to which he seemed destined as the teacher of a country school. Mr. Lawson immediately recommended the renouncing of poetry and the flute, and the substituting of the amusement of drawing in their stead, as being most likely to restore the balance of his mind; and as an employment well adapted to one of his recluse habits and inclinations. To this end sketches of the human figure, and landscapes, were provided for him; but his attempts were so unpromising that he threw them aside with disgust; and concluded that one at his period of life could never succeed in the art of delineation. Mr. Bartram now advised a trial at birds; and being tolerably skilful himself, exhibited his portfolio, which was graced with many specimens from his own hands. The attempt was made, and succeeded beyond the expectation of Wilson, or that of his friends. There was a magic in the employment which aroused all the energies of his soul; he saw, as it were, the dayspring of a new creation; and, from being the humble follower of his instructors, he was soon qualified to lead the way in the charming art of imitating the works of the Great Original.

That Wilson likewise undertook the task of delineating flowers, appears from the following note to Mr. Bartram, dated November 20th, 1803:

* The following incident was communicated to me by Colonel Carr, who had it from Wilson himself. While the latter labored under great depression of spirits, in order to soothe his mind he one day rambled with his gun. The piece by accident slipped from his hand, and, in making an effort to regain it, the lock was cocked. At that moment had the gun gone off, it is more than probable that he would have lost his life, as the muzzle was opposite to his breast. When Wilson reflected on the danger which he had escaped, he shuddered at the idea of the imputation of suicide, which a fatal occurrence, to one in his frame of mind, would have occasioned. There is room to conjecture that many have accidentally met their end, whose memories have been sullied by the alleged crime of self-murder.

"I have attempted two of those prints which Miss Nancy* so obligingly, and with so much honor to her own taste, selected for me. I was quite delighted with the anemone, but fear I have made but bungling work of it. Such as they are I send them for your inspection and opinion; neither of them is quite finished. For your kind advice towards my improvement I return my most grateful acknowledgments.

"The duties of my profession will not admit me to apply to this study with the assiduity and perseverance I could wish. Chief part of what I do is sketched by candle-light; and for this I am obliged to sacrifice the pleasures of social life, and the agreeable moments which I might enjoy in company with you and your amiable friend. I shall finish the other some time this week; and shall be happy if what I have done merit your approbation."

As Wilson advanced in drawing, he made corresponding progress in the knowledge of Ornithology. He had perused the works of some of the naturalists of Europe, who had written on the subject of the birds of America, and became so disgusted with their caricatured figures, fanciful theories, fables and misrepresentations, that on turning, as he himself observes, from these barren and musty records to the magnificent repository of the woods and fields—the *Grand Aviary of Nature*, his delight bordered on adoration. It was not in the inventions of man that the Divine Wisdom could be traced; but it was visible in the volume of Creation, wherein are inscribed the Author's lessons of goodness and love, in the conformation, the habitudes, melody and migrations, of the feathered tribes, that beautiful portion of the work of his hands.

To invite the attention of his fellow-citizens to a study, attended with so much pleasure and improvement, was the natural wish of one who had been educated in the School of Wisdom. He humbly thought it would not be rendering an unacceptable service to the GREAT MASTER OF CREATION himself, to derive from objects that everywhere present themselves in our rural walks, not only amusement and instruction, but the highest incitements to piety and virtue. Moreover, self-gratification, that source of so many of our virtuous actions, had its share in urging him to communicate his observations to others.† He examined the strength of his mind, and its resources; the undertaking seemed hazardous; he pondered it for a long while before he ventured to mention it to his friends. At length the subject was made known to Mr. Bartram, who freely expressed his confidence in the abilities and acquirements of Wilson; but, from a knowledge of the situation and circumstances of the latter, hinted his fears that the difficulties which stood in the way of such an enterprise were almost too great to be overcome. Wilson was not easily intimidated; the very mention of difficulties suggested to his mind the means of surmounting them, and the glory which would accrue from such an achievement. He had a ready answer to every objection of his cautious friend; and evinced such enthusiasm, that Mr. Bartram trembled lest his intemperate zeal should lead him into a situation, from the embarrassments of which he could not well be extricated.

* Mr. Bartram's niece, now the consort of Colonel Carr.

† Introduction to Vol. I.

The scheme was unfolded to Mr. Lawson, and met with his cordial approbation. But he observed that there were several considerations which should have their weight, in determining in an affair of so much importance. These were frankly stated; and followed by advice, which did not quadrate with the temperament of Wilson; who, vexed that his friend would not enter into his feelings, expressed his scorn of the maxims of prudence with which he was assailed, by styling them the offspring of a *cold, calculating, selfish* philosophy. Under date of March 12th, 1804, he thus writes to the last-named gentleman: "I dare say you begin to think me very ungenerous and unfriendly in not seeing you for so long a time. I will simply state the cause, and I know you will excuse me. Six days in one week I have no more time than just to swallow my meals, and return to my *sanctum sanctorum*. Five days of the following week are occupied in the same routine of *pedagoguing* matters; and the other two are sacrificed to that itch for drawing, which I caught from your honorable self. I never was more wishful to spend an afternoon with you. In three weeks I shall have a few days' vacancy, and mean to be in town chief part of the time. I am most earnestly bent on pursuing my plan of making a collection of all the birds in this part of North America. Now I don't want you to throw cold water, as Shakspeare says, on this notion, Quixotic as it may appear. I have been so long accustomed to the building of airy castles and brain windmills, that it has become one of my earthly comforts, a sort of a rough bone, that amuses me when sated with the dull drudgery of life."

TO MR. WM. BARTRAM.

"March 29th, 1804.

"Three months have passed away since I had the pleasure of seeing you; and three dark and heavy months they have been to your family. My heart has shared in your distress, and sincerely sympathizes with you for the loss you have sustained. But Time, the great curer of every grief, will gradually heal those wounds which Misfortune has inflicted; and many years of tranquillity and happiness are, I sincerely hope, reserved for you.

"I have been prevented from seeing you so long by the hurry of a crowded school, which occupied all my hours of daylight, and frequently half the others. The next quarter will leave me time enough; and, as there is no man living in whose company I have more real satisfaction, I hope you will pardon me if I now and then steal a little of your leisure.

"I send for your amusement a few attempts at some of our indigenous birds, hoping that your good nature will excuse their deficiencies, while you point them out to me. I intended to be the bearer of them myself, but having so many little accounts to draw up before to-morrow, I am compelled to plead this as my excuse. I am almost ashamed to send you these drawings; but I know your generous disposition will induce you to encourage one in whom you perceive a sincere and eager wish to do well. They were chiefly colored by candle-light.

"I have now got my collection of native birds considerably enlarged; and shall endeavor, if possible, to obtain all the smaller ones this summer. Be pleased to mark on the drawings, with a pencil, the names of each bird, as

except three or four, I do not know them. I shall be extremely obliged to you for every hint that will assist me in this agreeable amusement.

"I am very anxious to see the performances of your fair pupil; and beg you would assure her from me that any of the birds I have are heartily at her service. Surely nature is preferable, to copy after, to the works of the best masters, though perhaps more difficult; for I declare that the face of an owl, and the back of a lark, have put me to a nonplus; and if Miss Nancy will be so obliging as to try her hand on the last mentioned, I will furnish her with one in good order; and will copy her drawing with the greatest pleasure; having spent almost a week on two different ones, and afterwards destroyed them both, and got nearly in the slough of despond."

TO MR. WM. BARTRAM.

"KINGSESSING, March 31st, 1804.

"I take the first few moments I have had since receiving your letter, to thank you for your obliging attention to my little attempts at drawing, and for the very affectionate expressions of esteem with which you honor me. But sorry I am, indeed, that afflictions so severe, as those you mention, should fall where so much worth and sensibility reside, while the profligate, the unthinking and unfeeling, so frequently pass through life, strangers to sickness, adversity or suffering. But God visits those with distress whose enjoyments he wishes to render more exquisite. The storms of affliction do not last for ever; and sweet is the serene air, and warm sunshine, after a day of darkness and tempest. Our friend has, indeed, passed away, in the bloom of youth and expectation; but nothing has happened but what almost every day's experience teaches us to expect. How many millions of beautiful flowers have flourished and faded under your eye; and how often has the whole profusion of blossoms, the hopes of a whole year, been blasted by an untimely frost! He has gone only a little before us; we must soon follow; but while the feelings of nature cannot be repressed, it is our duty to bow with humble resignation to the decisions of the great Father of all, rather receiving with gratitude the blessings he is pleased to bestow, than repining at the loss of those he thinks proper to take from us. But allow me, my dear friend, to withdraw your thoughts from so melancholy a subject, since the best way to avoid the force of any overpowering passion, is to turn its direction another way.

"That lovely season is now approaching, when the garden, woods and fields, will again display their foliage and flowers. Every day we may expect strangers, flocking from the south, to fill our woods with harmony. The pencil of Nature is now at work, and outlines, tints, and gradations of lights and shades, that baffle all description, will soon be spread before us by that great master, our most benevolent friend and Father. Let us cheerfully participate in the feast he is preparing for all our senses. Let us survey those millions of green strangers, just peeping into day, as so many happy messengers come to proclaim the power and munificence of the Creator. I confess that I was always an enthusiast in my admiration of the rural scenery of Nature; but, since your example and encouragement have set me to attempt to imitate her productions, I see new beauties in every bird, plant or flower, I contemplate;

and find my ideas of the incomprehensible First Cause still more exalted the more minutely I examine his works.

"I sometimes smile to think that while others are immersed in deep schemes of speculation and aggrandizement—in building towns and purchasing plantations, I am entranced in contemplation over the plumage of a lark, or gazing like a despairing lover, on the lineaments of an owl. While others are hoarding up their bags of money, without the power of enjoying it, I am collecting, without injuring my conscience, or wounding my peace of mind, those beautiful specimens of Nature's works that are for ever pleasing. I have had live crows, hawks and owls—opossums, squirrels, snakes, lizards, &c., so that my room has sometimes reminded me of Noah's ark; but Noah had a wife in one corner of it, and in this particular our parallel does not altogether tally. I receive every subject of natural history that is brought to me, and though they do not march into my ark, from all quarters, as they did into that of our great ancestor, yet I find means, by the distribution of a few fivepenny *bills*, to make them find the way fast enough. A boy, not long ago, brought me a large basket full of crows. I expect his next load will be bull-frogs, if I don't soon issue orders to the contrary. One of my boys caught a mouse in school, a few days ago, and directly marched up to me with his prisoner. I set about drawing it that same evening, and all the while the pantings of its little heart showed it to be in the most extreme agonies of fear. I had intended to kill it, in order to fix it in the claws of a stuffed owl, but happening to spill a few drops of water near where it was tied, it lapped it up with such eagerness, and looked in my face with such an eye of supplicating terror, as perfectly overcame me. I immediately untied it, and restored it to life and liberty. The agonies of a prisoner at the stake, while the fire and instruments of torment are preparing, could not be more severe than the sufferings of that poor mouse; and, insignificant as the object was, I felt at that moment the sweet sensations that mercy leaves on the mind when she triumphs over cruelty.

"My dear friend, you see I take the liberty of an old acquaintance with you, in thus trifling with your time. You have already raised me out of the slough of despond, by the hopes of your agreeable conversation, and that of your amiable pupil. Nobody, I am sure, rejoices more in her acquisition of the beautiful accomplishment of drawing than myself. I hope she will persevere. I am persuaded that any pains you bestow on her will be rewarded beyond your expectations. Besides, it will be a new link in that chain of friendship and consanguinity by which you are already united; though I fear it will be a powerful addition to that attraction which was fully sufficient before, to make even a virtuoso quit his owls and opossums, and think of something else."

TO MR. WM. BARTRAM.

"May 21st, 1804.

"I send you a few more imitations of birds for your opinion, which I value beyond that of anybody else, though I am seriously apprehensive that I am troublesome. These are the last I shall draw for some time, as the employment consumes every leisure moment, leaving nothing for friendship, or those

rural recreations which I so much delight in. Even poetry, whose heavenly enthusiasm I used to glory in, can hardly ever find me at home, so much has this bewitching amusement engrossed all my senses.

"Please to send me the names of the birds. I wish to draw a small flower, in order to represent the humming-bird in the act of feeding: will you be so good as to send me one suitable, and not too large? The legs and feet of some are unfinished; they are all miserably imperfect, but your generous candor I know to be beyond all their defects."

TO MR. WM. BARTRAM.

"June 15th, 1804.

"I have arranged my business for our little journey; and, if to-morrow be fair, I shall have the chaise ready for you at any time in the morning, say seven o'clock. Or if you think any other hour more suitable, please to let me know by the bearer, and I shall make it answerable to me."

"June 16th, 1804.

"I believe we had better put off our intended jaunt until some more auspicious day.

"Clouds, from eastern regions driven,
Still obscure the gloomy skies;
Let us yield, since angry Heaven
Frowns upon our enterprise.

"Haply some unseen disaster
Hung impending o'er our way,
Which our kind Almighty Master
Saw, and sought us thus to stay.

"By and by, when fair Aurora
Bids the drowsy fogs to fly,
And the glorious god of Flora
Rises in a cloudless sky,

Then, in whirling chariot seated,
With my friend I'll gladly go:
With his converse richly treated—
Happy to be honored so."

The inconveniences of his situation, as teacher of a country school, determined Wilson to endeavor after some employment more congenial to his disposition; and that would enable him to attain to that distinction, as a scholar, which he was anxious to merit. He consequently directed his views to the "Literary Magazine," conducted by C. B. Brown, a monthly publication of some note, as a suitable vehicle for the diffusion of those productions which he hoped would arrest the attention of the public. In this magazine appeared his "Rural Walk," and his "Solitary Tutor;" but it does not appear that their author received any other reward for his well-meant endeavors than the thanks of the publisher. He was flattered, it is true, by a republication, in

the "Port Folio," of the "Rural Walk," with some "commendations of its beauties;" but I must confess that my perspicacity has not enabled me to detect them.

The then editor of the "Port Folio," Mr. Dennie, enjoyed the reputation of being a man of taste and judgment; and the major part of his selections should seem to prove that his character, in these respects, was well founded. But with regard to the poem in question, I am totally at a loss to discover by what principles of criticism he judged it, seeing that his opinion of it will by no means accord with mine. The initial stanza, which is not an unfair specimen of the whole, runs thus:

"The summer sun was riding high,
The woods in deepest verdure drest;
From care and clouds of dust to fly,
Across yon bubbling brook I past."

The reader of classical poetry may well pardon me if, out of an effusion consisting of forty-four stanzas, I save him the task of perusing any more than one.

TO MR. LAWSON.

"GRAY'S FERRY, August 14th, 1804.

"DEAR SIR,

"Enclosed is a copy of the '*Solitary Tutor*,' which I should like to see in the 'Literary Magazine' of this month, along with the other poem which I sent the editor last week. Wishing, for my future benefit, to call the public attention to these pieces, if, in the editor's opinion, they should seem worthy of it, I must request the favor of you to converse with him on this subject. You know the numerous pieces I am in possession of, would put it in my power to support tolerably well any recommendation he might bestow on these; and while they would not, I trust, disgrace the pages of his valuable publication, they might serve as my introduction to the literary world, and as a sort of inspiration to some future and more finished attempts. Knowing that you will freely pardon the *quantum* of vanity that suggested these hints,

"I remain, with real regard, &c."

TO MR. WM. BARTRAM.

"UNION SCHOOL, September 17th, 1804.

"The second volume of Pinkerton's Geography has at length made its appearance; and I take the freedom of transmitting it, and the atlas, for your amusement. To condemn so extensive a work before a re-perusal, or without taking into consideration all the difficulties that were to be surmounted, is, perhaps, not altogether fair. Yet we almost always form our judgment from the first impressions, and this judgment is very seldom relinquished. You will, therefore, excuse me if I give you some of the impressions made on myself by a cursory perusal.

"Taking it *all in all*, it is certainly the best treatise on the subject hitherto published; though had the author extended his plan, and, instead of two, given us four volumes, it would not frequently have laid him under the neces-

sity of disappointing his reader by the bare mention of things that required greater illustration; and of compressing the natural history of whole regions into half a page. Only *thirty-four* pages allotted to the whole United States! This is brevity with a vengeance. I had indeed expected from the exertions of Dr. Barton, as complete an account of the natural history of this part of the world as his means of information, and the limits of the work, would admit. I have been miserably disappointed; and you will pardon me when I say that his omitting entirely the least reference to your researches in botany and zoology, and seeming so solicitous to let us know of his own productions, bespeak a narrowness of mind, and self-consequence, which are truly despicable. Every one acquainted with you both, would have confidently trusted that he would rejoice in the opportunity of making the world better acquainted with a man whose works show such a minute and intimate knowledge of these subjects; and from whom he had received so much information. But no—not even the slightest allusion, lest posterity might discover that there existed, at this time, in the United States, a naturalist of information superior to his. My dear sir, I am a Scotchman, and don't love my friends with that cold selfish prudence which I see in some; and if I offend in thus speaking from the fulness of my heart, I know you will forgive me.

“Pinkerton has, indeed, furnished us with many curious particulars unknown, or, at least, unnoticed, by all former geographers; and also with other items long since exploded as fabulous and ridiculous; such is his account of the Upas or poisonous tree; and of children having been lost in some of our American swamps, and of being seen many years afterwards, in a wild, savage state! But he very gravely tells his readers that the people of Scotland eat little or no pork from a prejudice which they entertain against swine, the Devil having taken possession of some of them two thousand years ago! What an enlightened people these Scots must be; and what a delicate taste they must be possessed of! Yet I have traversed nearly three-fourths of that country, and mixed much with the common people, and never heard of such an objection before. Had the learned author told his readers that, until late years, Scotland, though abounding in rich pastures, even to its mountain tops, was yet but poorly productive in grain, fruit, &c., the usual food of hogs, and that on this account innumerable herds of sheep, horses and cattle were raised, and but very little pork, he would then have stated the simple facts; and not subjected himself to the laughter of every native of that part of Britain.

“As to the pretended antipathy of the Scots to eels, because they resemble snakes, it is equally ridiculous and improbable; ninety-nine out of a hundred of the natives never saw a snake in their lives. The fact is, it is as usual to eat eels in Scotland, where they can be got, as it is in America; and although I have frequently heard such objections made to the eating of eels here, where snakes are so common, yet I do not remember to have heard the comparison made in Scotland. I have taken notice of these two observations of his, because they are applied generally to the Scots, making them appear a weak, squeamish-stomached set of beings, infected with all the prejudices and antipathies of children.

"These are some of my objections to this work, which, however, in other respects, does honor to the talents, learning, and industry of the compiler."

In the month of October, 1804, Wilson, accompanied with two of his friends, set out on a pedestrian journey to visit the far-famed cataract of Niagara, whereof he had heard much, but which he had never had an opportunity of beholding. The picturesque scenery of that beautiful river, the vastness and sublimity of the cataract, as might be expected, filled the bosom of our traveller with the most rapturous emotions. And he ever after declared, that no language was sufficiently comprehensive to convey an adequate idea of that wonderful curiosity.

On the return of Wilson, he employed his leisure moments in writing a poetical narrative of the journey. This poem, which contains some interesting description, and pleasing imagery, is entitled "The Foresters;" and was gratuitously tendered to the proprietors of the *Port Folio*, and published in that excellent miscellany, in the years 1809-10.

This expedition was undertaken rather too late in the season, and, consequently, our travellers were subjected to hardships of which they were not aware. Winter overtook them whilst in the Genesee country, in their return by the way of Albany; and they were compelled to trudge, the greater part of the route, through snow midleg deep.

TO MR. WM. BARTRAM.

"GRAY'S FERRY, December 15th, 1804.

"Though now snug at home, looking back in recollection on the long, circuitous journey which I have at length finished, through deep snows, and almost uninhabited forests; over stupendous mountains, and down dangerous rivers: passing over, in a course of thirteen hundred miles, as great a variety of men and modes of living, as the same extent of country can exhibit in any part of the United States—though in this tour I have had every disadvantage of deep roads and rough weather; hurried marches, and many other inconveniences to encounter,—yet so far am I from being satisfied with what I have seen, or discouraged by the fatigues which every traveller must submit to, that I feel more eager than ever to commence some more extensive expedition; where scenes and subjects entirely new, and generally unknown, might reward my curiosity; and where perhaps my humble acquisitions might add something to the stores of knowledge. For all the hazards and privations incident to such an undertaking, I feel confident in my own spirit and resolution. With no family to enchain my affections; no ties but those of friendship; and the most ardent love of my adopted country—with a constitution which hardens amidst fatigues; and a disposition sociable and open, which can find itself at home by an Indian fire in the depth of the woods, as well as in the best apartment of the civilized; I have at present a real design of becoming a traveller. But I am miserably deficient in many acquirements absolutely necessary for such a character. Botany, mineralogy, and drawing I most ardently wish to be instructed in, and with these I should fear nothing. Can I yet make any progress in botany, sufficient to enable me to be useful, and what would be the most proper way to proceed? I have many leisure

moments that should be devoted to this pursuit, provided I could have hopes of succeeding. Your opinion on this subject will confer an additional obligation on your affectionate friend."

It is worthy of remark, that when men of uncommon talents conceive any great scheme, they usually overlook those circumstances of minor importance, which ordinary minds would estimate as first deserving attention. Thus Wilson, with an intellect expanded with information, and still grasping at further improvement as a means of distinction, would fain become a traveller, even at the very moment when the sum total of his funds amounted to *seventy-five cents!*

TO MR. WM. DUNCAN.

"GRAY'S FERRY, December 24th, 1804.

"You have no doubt looked for this letter long ago, but I wanted to see how matters would finally settle with respect to my school before I wrote; they remain, however, as uncertain as before; and this quarter will do little more than defray my board and firewood. Comfortable intelligence truly, methinks I hear you say; but no matter. * * * *

"I shall begin where you and I left off our story, viz. at Aurora, on the shores of the Cayuga.* The evening of that day, Isaac and I lodged at the outlet of Owasco Lake, on the turnpike, seven or eight miles from Cayuga bridge; we waded into the stream, washed our boots and pantaloons, and walked up to a contemptible dram-shop, where, taking possession of one side of the fire, we sat deafened with the noise and hubbub of a parcel of drunk tradesmen. At five next morning we started; it had frozen; and the road was in many places deep and slippery. I insensibly got into a hard step of walking; Isaac kept groaning a rod or so behind, though I carried his gun. * * * We set off again; and we stopped at the outlet of Skaneateles Lake; ate some pork-blubber and bread; and departed. At about two in the afternoon we passed Onondaga Hollow, and lodged in Manlius Square, a village of thirty houses, that have risen like mushrooms in two or three years; having walked this day thirty-four miles. On the morning of the 22d we started as usual by five—road rough—and Isaac grunting and lagging behind. This day we were joined by another young traveller, returning home to his father's on the Mohawk; he had a pocket bottle, and made frequent and long applications of it to his lips. The road this day bad, and the snow deeper than before. Passing through Oneida castle, I visited every house within three hundred yards of the road, and chatted to the copper-colored tribe. In the evening we lodged at Lard's tavern, within eleven miles of Utica, the roads deplorably bad, and Isaac and his disconsolate companion groaning at every step behind me, so that, as drummers do in battle, I was frequently obliged to keep before, and sing some lively ditty, to drown the sound of their ohs! and ahs! and O Lords! The road for fifteen or twenty miles was knee-deep of mud. We entered Utica at nine the next morning. This place is three times larger than it was four years ago; and from Oneida

*Mr. Duncan remained among his friends at Aurora.

to Utica is almost an entire continued village. This evening we lodged on the east side of the Mohawk, fifteen miles below Utica, near which I shot a bird of the size of a mocking-bird, which proves to be one never yet described by naturalists. I have it here in excellent order. From the town called Herkimer we set off through deep mud, and some snow; and about mid-day, between East and West Canada Creeks, I shot three birds of the jay kind, all of one species, which appears to be undescribed. Mr. Bartram is greatly pleased at the discovery; and I have saved two of them in tolerable condition. Below the Little Falls the road was excessively bad, and Isaac was almost in despair, in spite of all I could do to encourage him. We walked this day twenty-four miles; and early on the 25th started off again through deep mud, till we came within fifteen miles of Schenectady, when a boat coming down the river, Isaac expressed a wish to get on board. I walked six miles afterwards by myself, till it got so dark that I could hardly rescue myself from the mud-holes. The next morning I entered Schenectady, but Isaac did not arrive, in the boat, till noon. Here we took the stage-coach for Albany, the roads being excessively bad, and arrived there in the evening. After spending two days in Albany, we departed in a sloop, and reached New York on Saturday, at noon, the first of December. My boots were now reduced to legs and upper leathers; and my pantaloons in a sad plight. Twelve dollars were expended on these two articles. * * * * *

"On Friday, the 7th December, I reached Gray's Ferry, having walked forty-seven miles that day. I was absent two months on this journey, and I traversed in that time upwards of twelve hundred miles.

"The evening of my arrival I went to L***h's, whose wife had got twins, a boy and a girl. The boy was called after me: this honor took six dollars more from me. After paying for a cord of wood, I was left with only *three quarters* of a dollar."

TO MR. WM. BARTRAM.

"Union School, December 24th, 1804.

"I have perused Dr. Barton's publication,* and return it with many thanks for the agreeable and unexpected treat it has afforded me. The description of the Falls of Niagara is, in some places, a just, though faint, delineation of that stupendous cataract. But many interesting particulars are omitted; and much of the writer's reasoning on the improbability of the *wearing away* of the precipice, and consequent recession of the falls, seems contradicted by every appearance there; and many other assertions are incorrect. Yet on such a subject, everything, however trifling, seems to attract attention: the reader's imagination supplying him with scenery in abundance, even amidst the feebleness and barrenness of the meanest writer's description.

"After this article, I was most agreeably amused with '*Anecdotes of an American Crow*,' written in such a pleasing style of playful humor, as I have seldom seen surpassed; and forming a perfect antidote against the spleen;

*The Philadelphia Medical and Physical Journal, Vol. I.

abounding, at the same time, with observations and reflections not unworthy of a philosopher.

"The sketch of your father's life, with the extracts from his letters, I read with much pleasure. They will remain lasting monuments of the worth and respectability of the father, as well as of the filial affection of the son.

"The description of the Choctaw *Bonepickers* is a picture so horrible, that I think nothing can exceed it. Many other pieces in this work are new and interesting. It cannot fail to promote the knowledge of natural history, and deserves, on this account, every support and encouragement."

TO MR. WM. BARTRAM.

"December 26th, 1804.

"I send for your amusement the "Literary Magazine" for September, in which you will find a well-written, and, except in a few places, a correct description of the great Falls of Niagara. I yesterday saw a drawing of them, taken in 1768, and observe that many large rocks, that used formerly to appear in the rapids above the Horseshoe Falls, are now swept away; and the form of the curve considerably altered, the consequence of its gradual retrogression. I hope this account will entertain you, as I think it by far the most complete I have yet seen.

TO MR. WM. DUNCAN.

"KINGSESSING, February 20th, 1805.

"I received yours of January 1st, and wrote immediately; but partly through negligence, and partly through accident, it has not been put into the post-office; and I now sit down to give you some additional particulars.

* * * * *

"This winter has been entirely lost to me, as well as to yourself. I shall on the twelfth of next month be scarcely able to collect a sufficiency to pay my board, having not more than twenty-seven scholars. Five or six families, who used to send me their children, have been almost in a state of starvation. The rivers Schuylkill and Delaware are still shut, and wagons are passing and repassing at this moment upon the ice.

"The solitary hours of this winter I have employed in completing the poem which I originally intended for a description of your first journey to Ovid. It is now so altered as to bear little resemblance to the original; and I have named it the '*Foresters*.' It begins with a description of the Fall or Indian Summer, and relates, minutely, our peregrinations and adventures until our arrival at Catharine Landing, occupying ten hundred and thirty lines. The remainder will occupy nearly as much; and as I shall, if ever I publish it, insert numerous notes, I should be glad if, while you are on the spot, you would collect every interesting anecdote you can of the country, and of the places which we passed through. Hunting stories, &c., peculiar to the

would be acceptable. I should be extremely glad to spend one afternoon with you for the benefit of your criticisms. I lent the poem to Mr. *
* * * our senator, who seems to think it worth reading; and * *
* * has expressed many flattering compliments on my labors; but I don't

value either of their opinions so much as I would yours. I have bestowed more pains upon this than I ever did upon any former poem; and if it contain nothing really good, I shall for ever despair of producing any other that will."

TO MR. WM. BARTRAM.

"March 4th, 1805.

"My Dear Friend,

"This day the heart of every republican, of every good man, within the immense limits of our happy country, will leap with joy!

"The re-appointment and continuance of our beloved Jefferson to superintend our national concerns, is one of those distinguished blessings whose beneficent effects extend to posterity; and whose value our hearts may feel, but can never express.

"I congratulate with you, my dear friend, on this happy event. The enlightened philosopher,—the *distinguished naturalist*,—the *first statesman on earth*,—the friend, the ornament of science, is the father of our country, the faithful guardian of our liberties. May the precious fruits of such pre-eminent talents long, long be ours: and the grateful effusions of millions of freemen, at a far distant period, follow their aged and honored patriot to the peaceful tomb.

"I am at present engaged in drawing the two birds which I brought from the Mohawk; and, if I can finish them to your approbation, I intend to transmit them to our excellent president, as the child of an amiable parent presents to its affectionate father some little token of its esteem.

TO MR. WM. DUNCAN.

GRAY'S FERRY, March 26th, 1805.

"I received your letter of January 1st, some time about the beginning of February; and wrote the same evening very fully; but have heard nothing in return. Col. S. desires me to tell you to be in no uneasiness, nor part with the place to a disadvantage on his account. His son has been with me since January. I told you in my last of the thinness of my school: it produced me the last quarter only twenty-six scholars; and the sum of *fifteen* dollars was all the money I could raise from them at the end of the term. I immediately called the trustees together, and, stating the affair to them, proposed giving up the school. Two of them on the spot offered to subscribe between them one hundred dollars a-year, rather than permit me to go; and it was agreed to call a meeting of the people: the result was honorable to me, for forty-eight scholars were instantly subscribed for; so that the ensuing six months my school will be worth pretty near two hundred dollars. So much for my affairs. * * * * *

"I have never had a scrap from Scotland since last summer; but I am much more anxious to hear from you. I hope you have weathered this terrible winter, and that your heart and your limbs are as sound as ever. I also most devoutly wish that matters could be managed so that we could be together. This farm must either be sold, or let; it must not for ever be a great gulf between us. I have spent most of my leisure hours this winter in

writing the "*Foresters*," a poem descriptive of our journey. I have brought it up only to my shooting expedition at the head of the Seneca Lake; and it amounts already to twelve hundred lines. I hope that when you and I meet, it will afford you more pleasure than any of my productions has ever done. The two nondescript birds* which I killed on the Mohawk, attracted the notice of several naturalists about Philadelphia. On the 4th of March I set to work upon a large sheet of fine drawing-paper, and in ten days I finished two faithful drawings of them, far superior to any that I had done before. In the back ground I represented a view of the Falls of Niagara, with the woods wrought in as finely as I possibly could do. Mr. Lawson was highly pleased with it, and Mr. Bartram was even more so. I then wrote a letter to that *best of men*, Mr. Jefferson, which Mr. Bartram enclosed in one of his (both of which, at least copies of them, I shall show you when we meet), and sent off the whole, carefully rolled up, by the mail, on the 20th inst., to Monticello, in Virginia. The jay I presented to Mr. Peale, at his request, and it is now in the Museum. I have done but few other drawings, being so intent on the poem. I hope if you find any curious birds, you will attempt to preserve them, or at least their skins; if a small bird be carefully skinned, it can easily be set up at any time. I still intend to complete my collection of drawings; but the last will be by far the best. * * * *

"The poor of Philadelphia have suffered extremely this winter, the river having been frozen up for more than two months, yet the ice went away without doing any damage. I must again request that you and Alexander would collect the skins of as many birds as you have not seen here. * * * * The process of skinning the birds may amuse you; and your collection will be exceedingly agreeable to me. In the mean time never lose sight of getting rid of the troublesome farm, if it can be done with advantage; so that we may once more be together; and write to me frequently.

"I have now nothing more to say, but to give my affectionate compliments to your mother and all the family, and to wish you every comfort that the state of society you are in can afford. With the great volume of nature before you, you can never, while in health, be without amusement. Keep a diary of every thing you meet with that is curious. Look out, now and then, for natural curiosities as you traverse your farm; and remember me as you wander through your woody solitudes.

FROM MR. JEFFERSON.

"MONTICELLO, April 7th, 1805.

"Sir,

"I received here yesterday your favor of March 18th, with the elegant drawings of the new birds you found on your tour to Niagara, for which I pray you to accept my thanks. The jay is quite unknown to me. From my observations while in Europe, on the birds and quadrupeds of that quarter, I am of opinion there is not in our continent a single bird or quadruped which

* One of these birds was the Canada Jay (*Am. Orn.* vol. 3, p. 33, ed. 1st) which was known to naturalists.

is not sufficiently unlike all the members of its family there to be considered as specifically different; on this general observation I conclude with confidence that your jay is not a European bird.

"The first bird on the same sheet I judge to be a *Muscicapa* from its bill, as well as from the following circumstance. Two or three days before my arrival here a neighbor killed a bird, unknown to him, and never before seen here, as far as he could learn; it was brought to me soon after I arrived; but in the dusk of the evening, and so putrid that it could not be approached but with disgust. But I retain a sufficiently exact idea of its form and colors to be satisfied it is the same with yours. The only difference I find in yours is that the white on the back is not so pure, and that the one I saw had a little of a crest. Your figure, compared with the white-bellied *Gobe-mouche*, 8 Buff. 342, Pl. enlum. 566, shows a near relation. Buffon's is dark on the back.

"As you are curious in birds, there is one well worthy your attention, to be found, or rather heard, in every part of America, and yet scarcely ever to be seen; it is in all the forests, from spring to fall, and never but on the tops of the tallest trees, from which it perpetually serenades us with some of the sweetest notes, and as clear as those of the nightingale. I have followed it for miles without ever, but once, getting a good view of it. It is of the size and make of the mocking-bird, lightly thrush-colored on the back, and a grayish-white on the breast and belly. Mr. Randolph, my son-in-law, was in possession of one which had been shot by a neighbor; he pronounces this also a *Muscicapa*, and I think it much resembling the *Mouche-rolle de la Martinique*, 8 Buffon, 374, Pl. enlum. 568. As it abounds in all the neighborhood of Philadelphia, you may perhaps by patience and perseverance (of which much will be requisite) get a sight, if not a possession of it. I have for twenty years interested the young sportsmen of my neighborhood to shoot me one; but as yet without success. Accept my salutations and assurances of respect.

TH. JEFFERSON."

TO MR. WM. BARTRAM.

"April 18th, 1805.

"By Mr. Jefferson's condescending and very intelligent letter to me, which I enclose for your perusal, it appears that our jay is an entirely new, or rather undescribed bird, which met me on the banks of the Mohawk, to do me the honor of ushering him to the world. This duty I have conscientiously discharged, by introducing him to two naturalists: the one endeared to me, and every lover of science, by the benevolence of his heart; and the other ordained by Heaven to move in a distinguished orbit—an honor to the human race—the *patron of science*, and best hope of republicans! I say, that no bird, since Noah's days, could boast of such distinguished honor.

"Mr. Jefferson speaks of a very strange bird; please let me know what it is; I shall be on the look-out, and he must be a sly fellow if he escape me. I shall watch his motions, and the sound of his *serenade*, pretty closely, to be able to transmit to our worthy president a faithful sketch of a bird, which he has been so long curious to possess."

TO MR. WM. DUNCAN.

"GRAY'S FERRY, May 8th, 1805.

"I am glad to understand that the plantation is increasing so fast in value, but more so that it is not either sold or otherwise disposed of at the low rate at which we would have once thrown it away; yet it is the perpetual cause of separating us, which I am very sorry for. I am living a mere hermit, not spending one farthing, to see if I possibly can reimburse ****, who I can see is not so courteous and affable as formerly. I hope to be able to pay him one hundred dollars, with interest, next October, and the remainder in the spring, we shall then be clear of the world; and I don't care how many privations I suffer to effect that. I associate with nobody; spend my leisure hours in drawing, wandering through the woods, or playing upon the violin.

"I informed you in my last of sending Mr. Jefferson drawings of the Falls, and some birds, which I found on the Mohawk, and which it seems have never been taken notice of by any naturalist. He returned me a very kind and agreeable letter, from Monticello, expressing many obligations for the drawings, which he was highly pleased with; and describing to me a bird, which he is very desirous of possessing, having interested the young sportsmen of his neighborhood, he says, these twenty years, to shoot him one, without success. It is of the size and make of the mocking-bird, lightly thrush-colored on the back, and grayish-white on the breast; is never heard but from the tops of the tallest trees, whence it continually serenades us with some of the sweetest notes, and as clear as those of the nightingale. Mr. Bartram can give no account of this bird, except it be the wood robin, which I don't think it is; for Mr. Jefferson says, '*it is scarcely ever to be seen*;' and 'I have followed it for miles without ever, but once, getting a good view of it.'* I have been on the look-out ever since, but in vain. If you can hear of such a bird, let me know. I wish you also to look for the new bird which I discovered. It is of the size of the blue jay; and is of that genus—of a dull lead color on the back—the forehead white—black on the back of the neck—the breast and belly a dirty, or brownish white, with a white ring round its neck—its legs and bill exactly the jay's. Pray inquire respecting it, and any other new bird. If they could be conveyed to me, drawings of them, presented to the same dignified character, might open the road to a better acquaintance, and something better might follow. Alexander and you, will, I hope, be on the look-out with

* After many inquiries, and an unwearied research, it turned out that this invisible musician was no other than the Wood Robin, a bird which, if sought for, in those places which it affects, may be seen every hour of the day. Its favorite haunts Wilson has beautifully described in its history; but so far from being found always "on the tops of the tallest trees," it is seldom seen in such places, but seems to prefer the horizontal branches, at no great height, especially when piping its exquisitely melodious song. One of its names, the Ground Robin, is derived from the circumstance of its being frequently seen upon the ground. Its song consists of several distinct parts, at the conclusion of each of which it commonly flies a few feet and rests just long enough to continue the strain. A person unacquainted with these particulars, would suppose that he heard several birds, in various quarters, responding to each other, and would find it hard to believe that the whole was the performance of one.

the gun, and kill every bird that comes in your way; and keep written descriptions, or the skins, if possible, of those you don't know. Were I able, I would undertake another journey up to you through the woods, while the birds are abundant; and nothing would give me so much pleasure as to make another extensive tour with you for this purpose; for I am persuaded that there are many species yet undescribed; and Mr. Jefferson is anxious to replenish his museum with the rare productions of his country."

TO MR. WM. DUNCAN.

"GRAY'S FERRY, May 31st, 1805.

"Yesterday evening I was finishing a hanging-bird in my silent mansion, musing upon a certain affair, when Mr. L. popped his head in at the window, with a letter. I instantly laid down my pencil, and enjoyed a social *crack* with my distant friend; and was heartily and truly pleased with the upshot. In everything relative to this land business, you have acted amidst difficulties and discouragements with prudence and discretion. In refusing to engage with * * * * * you acted well; and I doubt not but you will be equally circumspect in making a transfer of the property, so that the Yankee will not be able, even if he were willing, to take you in. More than half of the roguery of one-half of mankind is owing to the simplicity of the other half. You have my hearty concurrence in the whole affair, for I impatiently wish you beside me, not only to enjoy your society and friendship, but to open to you the book of knowledge, and enable you, in your turn, to teach it to others. In plain language, I wish you to prosecute your studies with me a few months; a school will soon be found, and you can then pursue them without expense, and I trust with pleasure. The business has indeed its cares, but affords leisure for many amusements; and is decent and reputable when properly discharged. I am living in solitude; spending nothing; diligently attending to the duties of the day; and filling up every leisure moment with drawing and music. I have bought no clothes, nor shall I, this summer; therefore if you settle the matter with * * * as you have agreed, we can discharge our obligations to * * * *, and be in a state to go on with your studies for at least six months. Mr. * * * * * was here yesterday, and expressed many acknowledgments for the rapid progress * * * * * is making, for indeed I have exerted myself to pay my obligations to the father by my attentions to the son.

"I wrote you respecting the letter I had from the president. I have never been able to get a sight of the bird he mentions. I hope you will not neglect to bring your gun with you, and look out as you come along.

"I have done no more to the '*Foresters*.' The journey is brought up to my expedition upon the Seneca Lake. I am much in want of notes of the first settlement, and present state, of the different places that we passed, as we went up the Susquehanna; everything of this kind, with hunting anecdotes, &c., I wish you to collect in your way down. The remainder of the poem will, I hope, be superior to what is already written, the scenery and incidents being more interesting; and will extend to at least another fifteen hundred lines,

which will make in all about three thousand.* The notes will swell it to a tolerable size.

"The '*Rural Walk*,' which I published last summer in the Literary Magazine, has been lately republished in the Port Folio,† with many commendations on its beauties. The '*Solitary Tutor*' met with much approbation. But I reserve my best efforts for the remainder of the '*Foresters*.' * * *

"I have not mentioned anything of the sale of the land, nor shall I until the business is finally concluded. I shall expect to hear from you at least twice yet before you arrive; and I hope you will make no unnecessary delay in returning. As you cut a pretty ragged appearance at present, and want something to laugh at, suppose you set your muse to work upon your tatterdemalian dishabille. The former neatness of your garb, contrasted with its present squalidness, would make a capital subject for a song, not forgetting the causes. But you are in the dress of the people you live among: you are therefore in character. B. had a hat on when I was up in your quarter, the rim of which had been eaten off, close to his head, by the rats, or, perhaps, cut off to make soles to his shoes; yet it was so common as to escape observation. I saw another fellow, too, at the tavern, who had pieces cut out of his *behind*, like a swallow's tail."

The spring of the year 1805 gave to the enraptured view of our naturalist his interesting feathered acquaintance. He listened to their artless songs; he noticed their habitudes; he sketched their portraits. And, after having passed a few months varied with this charming occupation, he again writes to the respected inhabitant of the Botanic Garden:

Union School, July 2d, 1805.

"I dare say you will smile at my presumption, when I tell you that I have seriously begun to make a collection of drawings of the birds to be found in Pennsylvania, or that occasionally pass through it: twenty-eight, as a beginning, I send for your opinion. They are, I hope, inferior to what I shall produce, though as close copies of the originals as I could make. One or two of these I cannot find either in your nomenclature, or among the seven volumes of Edwards. I have never been able to find the bird Mr. Jefferson speaks of, and begin to think that it must be the Wood Robin, though it seems strange that he should represent it as so hard to be seen. Any hint for promoting my plan, or enabling me to execute better, I will receive from you with much pleasure. I have resigned every other amusement, except reading and fiddling, for this design, which I shall not give up without making a fair trial.

"Criticise these, my dear friend, without fear of offending me—this will instruct, but not discourage me.—For there is not among all our naturalists one who knows so well what they are, and how they ought to be represented. In the meantime accept of my best wishes for your happiness—wishes as sincere as ever one human being breathed for another. To your advice and

* This poem, as published in the "Port Folio," contains two thousand two hundred and eighteen lines. It is illustrated with four plates, two of which were engraved by George Cooke of London.

† For April 27th, 1805.

encouraging encomiums I am indebted for these few specimens, and for all that will follow. *They may yet tell posterity that I was honored with your friendship, and that to your inspiration they owe their existence.*"

The plates illustrative of the natural history of Edwards were etched by the author himself. Wilson had examined them very attentively, and felt assured that, with a little instruction in the art of etching, he could produce more accurate delineations; and would be enabled, by his superior knowledge of coloring, to finish the figures for his contemplated work, in a style not inferior to his spirited and beautiful drawings from nature.

Mr. Lawson was of course consulted on this occasion, and cheerfully contributed his advice and assistance in the novel and difficult enterprise. Wilson procured the copper; and, the former having laid the varnish, and furnished the necessary tools, he eagerly commenced the important operation, on the successful termination of which his happiness seemed to depend.

Let the reader pause and reflect on the extravagance of that enthusiasm, which could lead a person to imagine, that, without any knowledge of an art derived from experience, he could at once produce that effect, which is the result only of years of trial and diligence.

The next day after Wilson had parted from his preceptor, the latter, to use his own words, was surprised to behold him *bouncing* into his room, crying out—" *I have finished my plate! let us bite it in with the aquafortis at once, for I must have a proof before I leave town!*"* Lawson burst into laughter at the ludicrous appearance of his friend, animated with impetuous zeal; and to humor him granted his request. A proof was taken, but fell far short of Wilson's expectations, or of his ideas of correctness. However, he lost no time in conferring with Mr. Bartram, to whom he wrote as follows:

"November 29th, 1805.

"I have been amusing myself this some time in attempting to etch; and now send you a proof sheet of my first performance in this way. Be so good as communicate to me your own corrections, and those of your young friend and pupil. I will receive them as a very kind and particular favor. The drawings which I also send, that you may compare them together, were done from birds in full plumage, and in the best order. My next attempt in etching will perhaps be better, everything being new to me in this. I will send you the first impression I receive after I finish the plate."

In a short time another plate was prepared and completed with the despatch of the former. In fulfilment of his promise to his friend, he transmits a proof, accompanied with the following note:

* For the information of those of our readers who are unacquainted with the process of etching, we subjoin the following explanatory note:—

Upon the polished copper plate, a coat of varnish, of a particular composition, is thinly spread. The design is then traced, and cut through to the copper, with an instrument termed a point. A bank of wax is now raised around the plate, and aquafortis poured into the enclosure, which acid eats into the copper only where the point had passed. The length of time requisite for the successful action of the aquafortis, must be determined by the judgment of the operator. *

"Mr. Wilson's affectionate compliments to Mr. Bartram; and sends for his amusement and correction another proof of his *Birds of the United States*. The coloring being chiefly done last night, must soften criticism a little. Will be thankful for my friend's advice and correction.

"Mr. Wilson wishes his beloved friend a happy new year, and every blessing."

"Saturday, January 4th, 1806."

These essays in etching,* though creditable to Wilson's ingenuity and perseverance, yet by no means afforded satisfaction. He became now convinced that the *point* alone was not sufficient to produce the intended effect; and that nothing short of the accuracy of the *graver* would in anywise correspond to his ideas of excellence. But in the art of engraving he had never been instructed; and he could not command means sufficient to cover the expense of the plates even of a single volume, on the magnificent plan which his comprehensive mind had delineated. A proposition was now made to Mr. Lawson to engage in the work, on a joint concern. But there were several objections which this gentleman urged, sufficiently weighty, in his opinion, to warrant his non-acceptance of the offer. Wilson, finding his schemes thus baffled, declared, with solemn emphasis, his resolution of proceeding alone in the publication, if it should even cost him his life. "*I shall at least leave,*" continued he, "*a small beacon to point out where I perished.*"

TO MR. WM. BARTRAM.

"January 27th, 1806.

"Being in town on Saturday, I took the opportunity of calling on Mr. ———, who, in 1804, went down the Ohio, with one companion, in a small batteau. They sometimes proceeded seventy miles in twenty-four hours, going often night and day. They had an awning; and generally slept on board the boat, without ever catching cold, or any inconvenience by mosquitoes, except when in the neighborhood of swamps. He describes the country as exceedingly beautiful. The object of their journey being trade, they had neither gun nor fishing-tackle; and paid little or no attention to natural objects. He says the navigation of a batteau is perfectly easy, and attended with no hazard whatever. One solitary adventurer passed them in a small boat, going from Wheeling to New Orleans.

"If, my dear friend, we should be so happy as to go together, what would you think of laying our design before Mr. Jefferson, with a view to procure his advice, and recommendation to influential characters in the route? Could we procure his approbation and patronage, they would secure our success. Perhaps he might suggest some improvements in our plan. Had we a good companion, intimately acquainted with mineralogy, who would submit to our economical plan of proceeding, it would certainly enhance the value of the expedition. However, this I have no hopes of.

* The two first plates of the *Ornithology* are those which the author etched himself. The writer of this sketch has in his possession a proof of the first one, which he preserves as a relic of no small value. It is inscribed with the author's name.

"I see, by the newspapers, that Mr. Jefferson designs to employ persons to explore the shores of the Mississippi the ensuing summer: surely our exertions would promote his wishes. I write these particulars that you may give them the consideration they deserve; and we call upon you to deliberate further on the affair.

TO THE SAME.

"February 3d, 1806.

"The enclosed sketch of a letter is submitted for your opinion, and, if approved, I must request of you the favor to enclose it in one of your own to Mr. Jefferson. You see I am serious in my design of traversing our southern wildernesses. Disappointed in your company, I have no hopes in another's that would add any value to the Ohio tour. I am therefore driven to this expedient, and I hope it will succeed. Please to let me hear your sentiments on this affair to-morrow morning; and oblige yours, &c."

TO THE SAME.

"February 5th, 1806.

"I am infinitely obliged to you, my dear friend, for your favorable opinion of me, transmitted to the president. Should an engagement be the consequence, I will merit the character which you have given of me, or perish in the endeavor to deserve it. Accept my assurances of perpetual affection and esteem.

"The letters go off to-morrow."

It will be perceived, by the foregoing letters, that the President of the United States had it in contemplation to despatch men of science, for the purpose of exploring the country of the Mississippi. Wilson now conceived that a favorable opportunity would be afforded him of gratifying a desire, which he had long indulged, of visiting those regions, which he was convinced were rich in the various objects of science; and, particularly, where subjects, new and interesting, might be collected for his embryo work on the ornithology of our country. He expressed his wishes to Mr. Bartram, who approved of them; and the latter cheerfully wrote to his correspondent, Mr. Jefferson, stating Wilson's character and acquirements; and recommending him as one highly qualified to be employed in that important national enterprise. This introductory letter, indited in the most respectful terms, was accompanied with an application from Wilson himself, which, as a faithful biographer of my friend, I here think proper to insert entire:

TO HIS EXCELLENCY THOMAS JEFFERSON,

President of the United States.

"SIR:

"Having been engaged, these several years, in collecting materials, and furnishing drawings from nature, with the design of publishing a new Ornithology of the United States of America, so deficient in the works of Catesby, Edwards, and other Europeans, I have traversed the greater part of our northern and eastern districts; and have collected many birds undescribed by

these naturalists. Upwards of one hundred drawings are completed; and two plates in folio already engraved. But as many beautiful tribes frequent the Ohio, and the extensive country through which it passes, that probably never visit the Atlantic states; and as faithful representations of these can be taken only from living Nature, or from birds newly killed; I had planned an expedition down that river, from Pittsburgh to the Mississippi, thence to New Orleans, and to continue my researches by land in return to Philadelphia. I had engaged as a companion and assistant Mr. William Bartram, of this place, whose knowledge of Botany, as well as Zoology, would have enabled me to make the best of the voyage, and to collect many new specimens in both those departments. Sketches of these were to have been taken on the spot; and the subjects put in a state of preservation to finish our drawings from, as time would permit. We intended to set out from Pittsburgh about the beginning of May; and expected to reach New Orleans in September.

"But my venerable friend, Mr. Bartram, taking into more serious consideration his advanced age, being near seventy, and the weakness of his eye-sight; and apprehensive of his inability to encounter the fatigues and deprivations unavoidable in so extensive a tour; having, to my extreme regret, and the real loss of science, been induced to decline the journey; I had reluctantly abandoned the enterprise, and all hopes of accomplishing my purpose; till hearing that your excellency had it in contemplation to send travellers this ensuing summer up the Red River, the Arkansas, and other tributary streams of the Mississippi; and believing that my services might be of advantage to some of these parties in promoting your excellency's design; while the best opportunities would be afforded me of procuring subjects for the work which I have so much at heart; under these impressions I beg leave to offer myself for any of these expeditions; and can be ready at a short notice to attend your excellency's orders.

"Accustomed to the hardships of travelling, without a family, and an enthusiast in the pursuit of Natural History, I will devote my whole powers to merit your excellency's approbation; and ardently wish for an opportunity of testifying the sincerity of my professions, and the deep veneration with which I have the honor to be,

"Sir,

"Your obedient servant,

"ALEX. WILSON.*

"KINGSESS, February 6th, 1806."

Mr. Jefferson had in his port folio decisive proofs of Wilson's talents as an ornithologist, the latter having some time before, as the reader will have observed, transmitted to his excellency some elegant drawings of birds, accompanied with descriptions. Yet, with these evidences before him, backed with the recommendation of a discerning and experienced naturalist, Mr. Jefferson

* Wilson was particularly anxious to accompany Pike, who commenced his journey from the cantonment on the Missouri, for the sources of the Arkansas, &c., on the 15th July, 1806.

was either so scandalized at the informal application of our ornithologist, or so occupied in the great concerns of his exalted station, that no answer was returned to the overture; and the cause of the supposed contemptuous neglect, neither Wilson nor Bartram could ever ascertain.

Whatever might have been the views of the president, who unquestionably bore an effective part in scheming and encouraging the expeditions commanded by Lewis and Clark, and Pike, there can be but one opinion on the insufficiency of that plan of discovery which does not embrace the co-operation of men of letters and science: those whose knowledge will teach them to select what is valuable, and whose learning will enable them to digest it for the advantage of others. We would not draw an invidious comparison between the expeditions above-mentioned, and those under the command of Major Long; but we will rest in the hope that, as the government *now* appears to be sensible of the beneficial effects resulting from a liberal and enlightened policy, it will continue to foster that spirit of enterprise which distinguishes some of our citizens; and which, if properly directed, will redound to the honor and glory of our country.

TO MR. WILLIAM DUNCAN.

“GRAY’S FERRY, February 26th, 1806.

“Notwithstanding the great esteem I have for your judgment, in preference, many times, to my own, yet I believe we are both wrong in the proposed affair of Saturday week. I have not the smallest ambition of being considered an orator; and would it not, by some, be construed into vanity, or something worse, for me to go all the way from this place to deliver a political lecture at Milestown? Politics has begot me so many enemies, both in the old and new world, and has done me so little good, that I begin to think the less you and I harangue on that subject the better. I do not say this from any doubt I have of being able to say something on the subject, but much question the policy and prudence of it. If you and I attend punctually to the duties of our profession, and make our business our pleasure; and the improvement of our pupils, with their good government, our chief aim; honor, and respectability, and success will assuredly attend us, even if we never open our lips on politics.

“These have been some of my reflections since we parted. I hope you will weigh them in your own mind, and acquiesce in my resolution of not interfering in the debate on Saturday, as we talked of. At the same time I am really pleased to see the improvement the practice has produced in you; and would by no means wish to dissuade you from amusing and exercising your mind in this manner; because I know that your moderation in sentiment and conduct will always preserve you from ill will on any of these scores. But as it could add nothing to my fame, and as they have all heard me, often enough, on different subjects, about Milestown; and as it would raise no new friends to you, but might open old sores in some of your present friends, I hope you will agree with me that it will be prudent to decline the affair. And as you have never heard me deliver any of my own compositions in this

way, I will commit a speech to memory which I delivered at Milestown, in the winter of 1800, and pronounce it to you when we are by ourselves in the woods, *where we can offend nobody.*

"I have heard nothing from Washington yet; and I begin to think that either Mr. Jefferson expects a brush with the Spaniards, or has not received our letters; otherwise he would never act so *unpolitely* to one for whom he has so much esteem as for Mr. Bartram. *No hurry of business could excuse it.* But if affairs are not likely to be settled with Spain, very probably the design of sending parties through Louisiana will be suspended. Indeed I begin to think that if I should not be engaged by Mr. Jefferson, a journey by myself, and at my own expense, at a time, too, when we are just getting our heads above water, as one may say, would not be altogether good policy. Perhaps in another year we might be able, without so much injury, to make a tour together, through part of the south-west countries, which would double all the pleasures of the journey to me. I will proceed in the affair as you may think best, notwithstanding my eager wishes, and the disagreeableness of my present situation. I write this letter in the school-house—past ten at night—L.'s folks all gone to roost—the flying squirrels rattling in the loft above me, and the cats squalling in the cellar below. Wishing you a continuation of that success in teaching, which has already done you so much credit, I bid you for the present good-night."

We now approach that era of Wilson's life, in which we behold him emerging from the vale of obscurity, and attaining that enviable distinction, in the republic of science and letters, which it is the lot of but few to enjoy.

Mr. Samuel F. Bradford, bookseller, of Philadelphia, being about to publish an edition of Rees's New Cyclopædia, Wilson was introduced to him as one qualified to superintend the work; and was engaged, at a liberal salary, as assistant editor. The articles of agreement are dated the 20th of April, 1806.

TO MR. WM. BARTRAM.

"PHILADELPHIA, April 22d, 1806.

"My Dear Friend.

"I take the liberty of informing you that having been importuned to engage as assistant editor of that comprehensive and voluminous work, Rees's New Cyclopædia, now publishing here, and a generous salary offered me, I have now accepted of the same, and will commence my new avocation on Monday next.

"This engagement will, I hope, enable me, in more ways than one, to proceed in my intended Ornithology, to which all my leisure moments will be devoted. In the meantime I anticipate, with diffidence, the laborious, and very responsible, situation I am soon to be placed in, requiring a much more general fund of scientific knowledge, and stronger powers of mind, than I am possessed of; but all these objections have been overruled, and I am engaged, in conjunction with Mr. S. F. Bradford, to conduct the publication. In this pursuit I will often solicit your advice, and be happy to communicate your ob-

servations to posterity. Shut up from the sweet scenes of rural nature, so dear to my soul, conceive to yourself the pleasures I shall enjoy in sometimes paying a visit to your charming Retreat, and you cannot doubt of frequently seeing your very sincere friend."

Not long after his engagement, he unfolded his mind to Mr. Bradford on the subject of his projected Ornithology; and exhibited such evidence of his talents for a work of that nature, that the latter promptly agreed to become the publisher of it, and to furnish the requisite funds; and now, for the first time, Wilson found those obstructions removed, which had opposed his favorite enterprise.

TO MR. WILSON, AT THE FALLS OF NIAGARA.

"PHILADELPHIA, July 8th, 1806.

"Dear Sir.

"This will be handed to you by Mr. Michaux, a gentleman of an amiable character, and a distinguished naturalist, who is pursuing his botanical researches through North America, and intends visiting the Cataract of Niagara. The kindness I received from your family in 1804 makes me desirous that my friend, Mr. Michaux, should reside with you during his stay at Niagara; and any attention paid to him will be considered as done to myself, and suitable acknowledgments made in person by me on my arrival at Niagara, which I expect will be early next spring.

"You will be so good as give Mr. Michaux information respecting the late rupture of the rock at the Falls, of the burning spring above, and point out to him the place of descent to the rapids below, with any other information respecting the wonderful scenery around you.

"In the short stay I made, and the unfavorable weather I experienced, I was prevented from finishing my intended sketch equal to my wishes; but I design to spend several weeks with you, and not only take correct drawings, but particular descriptions of everything relating to that stupendous Cataract, and to publish a more complete and satisfactory account, and a better representation of it, than has been yet done in the United States.*

"I had a rough journey home through the Genesee country, which was covered with snow to the depth of fifteen inches, and continued so all the way to Albany. If you know of any gentlemen in your neighborhood acquainted with botany, be so good as introduce Mr. Michaux to them."

TO MR. WM. DUNCAN.

"PHILADELPHIA, April 8th, 1807.

"Enclosed is a proof-sheet of our prospectus; as soon as the impressions are thrown off on fine paper, I will transmit one for Mr. L. This afternoon Mr.

* Wilson's subsequent engagements prevented his return to the Falls, in conformity with his wishes; but his sketches were completed by an artist, engraved by George Cooke of London, and illustrate his poem of the "Foresters," which was published in the Port Folio. These well-engraved views, which are two in number, convey a good idea of the famous Cataract; the "Great Pitch," in particular, is admirably represented.

Lawson is to have one of the plates completely finished; and I am going to set the copper-plate printer at work to print each bird in its natural colors, which will be a great advantage in coloring, as the black ink will not then stain the fine tints. We mean to bind in the prospectus at the end of the next half volume, for which purpose twenty-five hundred copies are to be thrown off; and an agent will be appointed in every town in the Union. The prospectus will also be printed in all the newspapers; and everything done to promote the undertaking.

"I hope you have made a beginning, and have already a collection of heads, bills and claws, delineated. If this work should go on, it will be a five years' affair; and may open the way to something more extensive; for which reason I am anxious to have you with me to share the harvest.

"I started this morning, by peep of day, with my gun, for the purpose of shooting a nuthatch. After jumping a hundred fences, and getting over the ankles in mud (for I had put on my shoes for lightness), I found myself almost at the junction of the Schuylkill and Delaware, without success, there being hardly half an acre of woodland in the whole *Neck*; and the nuthatch generally frequents large-timbered woods. I returned home at eight o'clock, after getting completely wet, and in a profuse perspiration, which, contrary to the maxims of the doctors, has done me a great deal of good; and I intend to repeat the dose; except that I shall leave out the ingredient of the wet feet, if otherwise convenient. Were I to prescribe such a remedy to Lawson, he would be ready to think me mad. Moderate, nay even pretty severe exercise, is the best medicine in the world for sedentary people, and ought not to be neglected on any account."

TO MR. WM. BARTRAM.

"PHILADELPHIA, April 29th, 1807.

"My Dear Sir.

"The receipt of yours of the 11th inst., in which you approve of my intended publication of American Ornithology, gave me much satisfaction; and your promise of befriending me in the arduous attempt commands my unfeigned gratitude. From the opportunities I have lately had of examining into the works of Americans who have treated of this part of our natural history, I am satisfied that none of them have bestowed such minute attention on the subject as you yourself have done. Indeed they have done little more than copied your nomenclature and observations, and referred to your authority. To have you, therefore, to consult with in the course of this great publication I consider a most happy and even auspicious circumstance; and I hope you will, on all occasions, be a rigid censor, and kind monitor, whenever you find me deviating from the beauties of nature, or the truth of description.

"The more I read and reflect upon the subject, the more dissatisfied I am with the *specific* names which have been used by almost every writer. A name should, if possible, be expressive of some peculiarity in color, conformation, or habit; if it will equally apply to two different species, it is certainly an improper one. Is *migratorius* an epithet peculiarly applicable to the robin? Is it not equally so to almost every species of *turdus* we have? *Europea* has

been applied by Pennant to our large *sitta* or nuthatch, which is certainly a different species from the European, the latter being destitute of the black head, neck and shoulders of ours. Latham calls it *carolinensis*, but it is as much an inhabitant of Pennsylvania and New York as Carolina. The small red-bellied *sitta* is called *canadensis* by Latham, a name equally objectionable with the other. *Turdus minor* seems also improper; in short I consider this part of the business as peculiarly perplexing; and I beg to have your opinion on the matter, particularly with respect to the birds I have mentioned, whether I shall hazard a new nomenclature, or, by copying, sanction what I do not approve of.

"I hope you are in good health, enjoying in your little paradise the advances of spring, shedding leaves, buds and blossoms, around her; and bringing in her train choirs of the sweetest songsters that earth can boast of; while every zephyr that plays around you breathes fragrance. Ah! how different my situation in this delightful season, immured among musty books, and compelled to forego the harmony of the woods for the everlasting din of the city; the very face of the blessed heavens involved in soot, and interrupted by walls and chimney tops. But if I don't launch out into the fields and woods oftener than I have done these twelve months, may I be transformed into a street musician." (The remainder of the MS. defaced.)

All things being happily arranged, Wilson applied himself to his varied and extensive duties with a diligence which scarcely admitted repose; until finding his health much impaired thereby, he was induced to seek the benefits of relaxation, in a pedestrian journey through a part of Pennsylvania; which afforded him a favorable opportunity of procuring specimens of birds; and some additional information relating to them, of which he was very desirous to be possessed. This excursion was made in the month of August, 1807; and on his return he engaged in his avocations with renewed ardor; devoting every moment which could be spared from his editorial duties to his great work.

At length, in the month of September, 1808, the first volume of the "*American Ornithology*" made its appearance. From the date of the arrangement with the publisher, a prospectus had been issued, wherein the nature and intended execution of the work were specified; but yet no one appeared to entertain an adequate idea of the elegant treat which was about to be afforded to the lovers of the arts, and of useful literature. And when the volume was presented to the public, their delight was only equalled by their astonishment, that our country, as yet in its infancy, should produce an original work in science, that could vie, in its essentials, with the proudest productions of a similar nature of the European world.

TO MR. WM. BARTRAM.

"PHILADELPHIA, September 21st, 1808.

"In a few minutes I set out for the Eastern States, through Boston to Maine, and back through the state of Vermont, in search of birds and subscribers. I regret that I have not been able to spend an evening with you

before my departure. But I shall have a better stock of adventures to relate after my return.

"I send a copy of the prospectus, and my best wishes for the happiness of the whole family. I leave my horse behind, and go by the stage coach, as being the least troublesome. I hope to make some discoveries in my tour, the least agreeable of which will, I fear, be—that I have bestowed a great deal of labor and expense to little purpose. But all these things will not prevent me from enjoying, as I pass along, the glorious face of Nature, and her admirable productions, while I have eyes to see, and taste and judgment to appreciate them."

After despatching the above note, Wilson set out on a journey to the eastward, to exhibit his book, and procure subscribers. He travelled as far as the District of Maine; and returned through Vermont, by the way of Albany, to Philadelphia. From a letter to a friend, dated Boston, October 10th, 1808, we have made the following extract:

"I have purposely avoided saying anything either good or bad, on the encouragement I have met with. I shall only say, that among the many thousands who have examined my book, and among these were men of the first character for taste and literature, I have heard nothing but expressions of the highest admiration and esteem. If I have been mistaken in publishing a work too good for the country, it is a fault not likely to be soon repeated, and will pretty severely correct itself. But whatever may be the result of these matters, I shall not sit down with folded hands, while anything can be done to carry my point: since God helps them who help themselves. I am fixing correspondents in every corner of these northern regions, like so many pickets and outposts, so that scarcely a *wren* or *tit* shall be able to pass along, from York to Canada, but I shall get intelligence of it."

TO MR. D. H. MILLER.

BOSTON, October 12th, 1808.

"Dear Sir.

"I arrived here on Sunday last, after various adventures, the particulars of which, as well as the observations I have had leisure to make upon the passing scenery around me, I shall endeavor, as far as possible, to compress into this letter, for your own satisfaction, and that of my friends who may be interested for my welfare. My company in the stage-coach to New York were all unknown to me, except Colonel S., who was on his route to Fort Oswego, on Lake Ontario, to take command of the troops intended to be stationed on that part of the frontier, to prevent evasions of the embargo law. The sociable disposition and affability of the Colonel made this part of the journey pass very agreeably, for both being fond of walking, whenever the driver stopped to water; or drink grog, which was generally every six or eight miles, we set out on foot, and sometimes got on several miles before the coach overhauled us. By this method we enjoyed our ride, and with some little saving of horseflesh, which I know you will approve of. At Princeton I bade my fellow-travellers good-by, as I had to wait upon the reverend doctors of the college. I took my book under my arm, put several copies of the prospectus into my pocket,

and walked up to this spacious sanctuary of literature. I could amuse you with some of my reflections on this occasion, but room will not permit. Dr. Smith, the president, and Dr. M'Lean, Professor of Natural History, were the only two I found at home. The latter invited me to tea, and both were much pleased and surprised with the appearance of the work. I expected to receive some valuable information from M'Lean, on the ornithology of the country but I soon found, to my astonishment, that he scarcely knew a *sparrow* from a *woodpecker*. At his particular request, I left a specimen of the plates with him; and from what passed between us, I have hopes that he will pay more attention to this department of his profession than he has hitherto done. I visited several other literary characters; and, at about half-past eight, the Pilot coming up, I took my passage in it to New Brunswick, which we reached at midnight, and where I immediately went to bed.

"The next morning was spent in visiting the few gentlemen who were likely to patronize my undertaking; I had another task of the same kind at Elizabethtown; and, without tiring you with details that would fill a volume, I shall only say that I reached Newark that day, having gratified the curiosity, and feasted the eyes, of a great number of people, who repaid me with the most extravagant compliments, which I would have very willingly exchanged for a few simple *subscriptions*. I spent nearly the whole of Saturday in Newark, where my book attracted as many starers as a bear or a mammoth would have done; and I arrived in New York the same evening. The next day I wrote a number of letters, enclosing copies of the prospectus, to different gentlemen in town. In the afternoon of Tuesday I took my book, and waited on each of those gentlemen to whom I had written the preceding day. Among these I found some friends, but more admirers. The Professors of Columbia College expressed much esteem for my performance. The professor of languages, being a Scotchman, and also a Wilson, seemed to feel all the pride of national partiality so common to his countrymen; and would have done me any favor in his power. I spent the whole of this week traversing the streets, from one particular house to another, till, I believe, I became almost as well known as the public crier, or the clerk of the market, for I could frequently perceive gentlemen point me out to others as I passed with my book under my arm.

* * * * *

"On Sunday morning, October 2d, I went on board a packet for New Haven, distant about ninety miles. The wind was favorable, and carried us rapidly through Hellgate (a place I had no intention of calling at in my tour), on the other side of which we found upwards of sixty vessels beating up for a passage. The Sound here, between Long Island and the main, is narrowed to less than half a mile, and filled with small islands, and enormous rocks under water, among which the tide roars and boils violently, and has proved fatal to many a seaman. At high water it is nearly as smooth as any other place, and can then be safely passed. The country, on the New York side, is ornamented with handsome villas, painted white, and surrounded by great numbers of Lombardy poplars. The breeze increasing to a gale, in eight hours from the time we set sail the high red-fronted mountain of New Haven rose to our view. In two hours more we landed; and, by the stillness and

solemnity of the streets, recollected we were in New England, and that it was Sunday, which latter circumstance had been almost forgotten on board the packet-boat.

"This town is situated upon a sandy plain; and the streets are shaded with elm trees and poplars. In a large park or common, covered with grass, and crossed by two streets, and several foot-paths, stand the church, the state-house and college buildings, which last are one hundred and eighty yards in front. From these structures rise four or five wooden spires, which, in former time, as one of the professors informed me, were so infested by woodpeckers, which bored them in all directions, that, to preserve their steeples from destruction, it became necessary to set people, with guns, to watch and shoot these invaders of the sanctuary. Just about the town the pasture-fields and corn look well, but a few miles off, the country is poor and ill cultivated.

"The literati of New Haven received me with politeness and respect; and after making my usual rounds, which occupied a day and a half, I set off for Middletown, twenty-two miles distant. The country through which I passed was flat and sandy—in some places whole fields were entirely covered with sand, not a blade of vegetation to be seen, like some parts of New Jersey. Round Middletown, however, the country is really beautiful—the soil rich; and here I first saw the river Connecticut, stretching along the east side of the town, which consists of one very broad street, with rows of elms on each side. On entering I found the street filled with troops, it being muster-day; and I counted two hundred and fifty horse, and six hundred foot, all in uniform. The sides of the street were choked up with wagons, carts and wheel-barrows, filled with bread, roast beef, fowls, cheese, liquors, barrels of cider, and rum bottles. Some were singing out, 'Here's the best brandy you ever put into your *head*!' others in dozens shouting, 'Here's the round and sound gingerbread! most capital gingerbread!' In one place I observed a row of twenty or thirty country girls, drawn up with their backs to a fence, and two young fellows supplying them with rolls of bread from a neighboring stall, which they ate with a hearty appetite, keeping nearly as good time with their grinders as the militia did with their muskets. In another place the crowd had formed a ring, within which they danced to the catgut scrapings of an old negro. The spectators looked on with as much gravity as if they were listening to a sermon; and the dancers labored with such seriousness, that it seemed more like a penance imposed on the poor devils, for past sins, than mere amusement.

"I waited on a Mr. A. of this town; and by him I was introduced to several others. He also furnished me with a good deal of information respecting the birds of New England. He is a great sportsman—a man of fortune and education—and has a considerable number of stuffed birds, some of which he gave me, besides letters to several gentlemen of influence in Boston. I endeavored to recompense him in the best manner I could, and again pursued my route to the north-east. The country between this and Hartford is extremely beautiful, much resembling that between Philadelphia and Frankford. The road is a hard sandy soil; and in one place I had an immense prospect of the surrounding country, nearly equal to that which we saw returning from Easton,

but less covered with woods. On reaching Hartford, I waited on Mr. G., a member of congress, who recommended me to several others, particularly a Mr. W., a gentleman of taste and fortune, who was extremely obliging. The publisher of a newspaper here expressed the highest admiration of the work, and has since paid many handsome compliments to it in his publication, as three other editors did in New York. This is a species of currency that will neither purchase plates, nor pay the printer; but, nevertheless, it is gratifying to the vanity of an author—*when nothing better can be got*. My journey from Hartford to Boston, through Springfield, Worcester, &c., one hundred and twenty-eight miles, it is impossible for me to detail at this time. From the time I entered Massachusetts, until within ten miles of Boston, which distance is nearly two-thirds the length of the whole state, I took notice that the principal features of the country were stony mountains, rocky pasture-fields, and hills and swamps adorned with pines. The fences, in every direction, are composed of strong stones; and, unless a few straggling, self-planted, stunted apple trees, overgrown with moss, deserve the name, there is hardly an orchard to be seen in ten miles. Every six or eight miles you come to a meeting-house, painted white, with a spire. I could perceive little difference in the form or elevation of their steeples.

“The people here make no distinction between *town* and *township*; and travellers frequently ask the driver of the stage-coach, ‘What town are we now in?’ when perhaps we were upon the top of a miserable barren mountain, several miles from a house. It is in vain to reason with the people on the impropriety of this—custom makes every absurdity proper. There is scarcely any currency in this country but paper, and I solemnly declare that I do not recollect having seen one hard dollar since I left New York. Bills even of twenty-five cents, of a hundred different banks, whose very names one has never heard of before, are continually in circulation. I say nothing of the jargon which prevails in the country. Their boasted schools, if I may judge by the state of their school-houses, are no better than our own.

“Lawyers swarm in every town, like locusts; almost every door has the word *Office* painted over it, which, like the web of a spider, points out the place where the spoiler lurks for his prey. There is little or no improvement in agriculture; in fifty miles I did not observe a single grain or stubble field, though the country has been cleared and settled these one hundred and fifty years. In short, the *steady habits* of a great portion of the inhabitants of those parts of New England through which I passed, seem to be laziness, law bickerings and * * * *. A man here is as much ashamed of being seen walking the streets on Sunday, unless in going and returning from church, as many would be of being seen going to a * * * * *.

“As you approach Boston the country improves in its appearance; the stone fences give place to those of posts and rails; the road becomes wide and spacious; and everything announces a better degree of refinement and civilization. It was dark when I entered Boston, of which I shall give you some account in my next. I have visited the celebrated Bunker’s Hill, and no devout pilgrim ever approached the sacred tomb of his holy prophet with more awful enthusiasm, and profound veneration, than I felt in tracing the grass-grown

entrenchments of this hallowed spot, made immortal by the bravery of those heroes who defended it, whose ashes are now mingled with its soil, and of whom a mean, beggarly *pillar of bricks* is all the memento."

TO MR. D. H. MILLER.

"WINDSOR, Vt., October 26th, 1808.

"Dear Sir.

"I wrote you two or three weeks ago from Boston, where I spent about a week. A Mr. S., formerly private secretary to John Adams, introduced me to many of the first rank in the place, whose influence procured me an acquaintance with others; and I journeyed through the streets of Boston with my book, as I did at New York and other places, visiting all the literary characters I could find access to.

"I spent one morning examining Bunker's Hill, accompanied by Lieutenant Miller and Sergeant Carter, two old soldiers of the Revolution, who were both in that celebrated battle, and who pointed out to me a great number of interesting places. The brother of General Warren, who is a respectable physician of Boston, became very much my friend, and related to me many other matters respecting the engagement.

"I visited the University at Cambridge, where there is a fine library, but the most tumultuous set of students I ever saw.

"From the top of Bunker's Hill, Boston, Charlestown, the ocean, islands and adjacent country, form the most beautifully varied prospect I ever beheld.

"The streets of Boston are a perfect labyrinth. The markets are dirty; the fish-market is so filthy that I will not disgust you by a description of it. Wherever you walk you hear the most hideous howling, as if some miserable wretch were expiring on the wheel at every corner; this, however, is nothing but the draymen shouting to their horses. Their drays are twenty-eight feet long, drawn by two horses, and carry ten barrels of flour. From Boston I set out for Salem, the country between swampy, and in some places the most barren, rocky, and desolate in nature. Salem is a neat little town. The wharves were crowded with vessels. One wharf here is twenty hundred and twenty-two feet long. I staid here two days, and again set off for Newburyport, through a rocky, uncultivated, sterile country."

* * * * *

"I travelled on through New Hampshire, stopping at every place where I was likely to do any business; and went as far east as Portland in Maine, where I staid three days, and, the supreme court being then sitting, I had an opportunity of seeing and conversing with people from the remotest boundaries of the United States in this quarter, and received much interesting information from them with regard to the birds that frequent these northern regions. From Portland I directed my course across the country, among dreary savage glens, and mountains covered with pines and hemlocks, amid whose black and half-burnt trunks the everlasting rocks and stones, that cover this country, 'grinned horribly.' One hundred and fifty-seven miles brought me to Dartmouth College, New Hampshire, on the Vermont line. Here I paid my addresses to the reverend fathers of literature, and met with a kind and obliging

reception. Dr. Wheelock, the president, made me eat at his table, and the professors vied with each other to oblige me.

“I expect to be in Albany in five days, and if the legislature be sitting, I shall be detained perhaps three days there. In eight days more I hope to be in Philadelphia. I have labored with the zeal of a knight-errant in exhibiting this book of mine, wherever I went, travelling with it, like a beggar with his bantling, from town to town, and from one country to another. I have been loaded with praises—with compliments and kindnesses—shaken almost to pieces in stage-coaches; have wandered among strangers, hearing the same *Oh's* and *Ah's*, and telling the same story a thousand times over—and for what? Ay, that's it! You are very anxious to know, and you *shall* know the whole when I reach Philadelphia.”

TO MR. ALEXANDER LAWSON.

“ALBANY, November 3d, 1808.

“Dear Sir.

“Having a few leisure moments at disposal, I will devote them to your service in giving you a sketch of some circumstances in my long literary pilgrimage, not mentioned in my letters to Mr. Miller. And in the first place, I ought to thank you for the thousands of compliments I have received for my birds, from persons of all descriptions; which were chiefly due to the taste and skill of the engraver. In short, the book, in all its parts, so far exceeds the ideas and expectations of the first literary characters in the eastern section of the United States, as to command their admiration and respect. The only objection has been the sum of *one hundred and twenty dollars*, which, in innumerable instances, has risen like an evil genius between me and my hopes. Yet I doubt not but when those copies subscribed for are delivered, and the book a little better known, the whole number will be disposed of, and perhaps encouragement given to go on with the rest. To effect this, to me, most desirable object, I have encountered the fatigues of a long, circuitous, and expensive journey, with a zeal that has increased with increasing difficulties; and sorry I am to say that the whole number of subscribers which I have obtained amounts only to *forty-one*.

“While in New York I had the curiosity to call on the celebrated author of the ‘Rights of Man.’ He lives in Greenwich, a short way from the city. In the only decent apartment of a small indifferent-looking frame house, I found this extraordinary man, sitting wrapped in a night-gown, the table before him covered with newspapers, with pen and ink beside him. Paine's face would have excellently suited the character of *Bardo'ph*; but the penetration and intelligence of his eye bespeak the man of genius, and of the world. He complained to me of his inability to walk, an exercise he was formerly fond of;—he examined my book, leaf by leaf, with great attention—desired me to put down his name as a subscriber; and, after inquiring particularly for Mr. P. and Mr. B., wished to be remembered to both.

“My journey through almost the whole of New England has rather lowered the Yankees in my esteem. Except a few neat academies, I found their

school-houses equally ruinous and deserted with ours—fields covered with stones—stone-fences—scrubby oaks and pine trees—wretched orchards—scarcely one grain-field in twenty miles—the taverns along the road dirty, and filled with loungers, brawling about lawsuits and politics—the people snappish, and extortioners, lazy, and two hundred years behind the Pennsylvanians in agricultural improvements. I traversed the country bordering the river Connecticut for nearly two hundred miles. Mountains rose on either side, sometimes three, six, or eight miles apart, the space between almost altogether alluvial; the plains fertile, but not half-cultivated. From some projecting headlands I had immense prospects of the surrounding countries, everywhere clothed in pine, hemlock, and scrubby oak.

“It was late in the evening when I entered Boston, and, whirling through the narrow, lighted streets, or rather lanes, I could form but a very imperfect idea of the town. Early the next morning, resolved to see where I was, I sought out the way to Beacon Hill, the highest part of the town, and whence you look down on the roofs of the houses—the bay interspersed with islands—the ocean—the surrounding country, and distant mountains of New Hampshire; but the most singular objects are the long wooden bridges, of which there are five or six, some of them three-quarters of a mile long, uniting the towns of Boston and Charlestown with each other, and with the main land. I looked round with an eager eye for that eminence so justly celebrated in the history of the Revolution of the United States, BUNKER’S HILL, but I could see nothing that I could think deserving of the name, till a gentleman, who stood by, pointed out a white monument upon a height beyond Charlestown, which he said was the place. I explored my way thither without paying much attention to other passing objects; and, in tracing the streets of Charlestown, was astonished and hurt at the indifference with which the inhabitants directed me to the place.* I inquired if there were any person still living here who had been in the battle, and I was directed to a Mr. Miller, who was a lieutenant in this memorable affair. He is a man of about sixty—stout,

* We have here a trait of character worthy of note. Wilson’s enthusiasm did not permit him to reflect, that an object which presents uncommon attractions to one who beholds it for the first time, can have no such effect upon the minds of the multitude, accustomed to view it from their infancy; and in whose breasts those chaste and exquisite feelings which result from taste, refined by culture, can have no place.

But what Wilson felt upon this occasion, was that which almost all men of genius and sensibility experience when similarly situated—that divine enthusiasm, which exalts one, as it were, above mortality, and which commands our respect in proportion as the subject of it is estimable or great.

Who has not read, or having read, who can forget, that admirable passage in Johnson’s *Journey to the Hebrides*, wherein the illustrious traveller relates his reflections on his landing upon the island of Icolmkill! “Far from me, and from my friends,” says he, “be such frigid philosophy as may conduct us indifferent and unmoved over any ground which has been dignified by wisdom, bravery, or virtue.” That this frigid philosophy was a stranger to the soul of Wilson, we have his own declaration in evidence; and so little skilled was he in the art of concealing his emotions, that, on any occasion which awakened his sensibility, he would exhibit the impulse of simple nature by weeping like a child.

remarkably fresh-colored, with a benign and manly countenance. I introduced myself without ceremony—shook his hand with sincere cordiality, and said, with some warmth, that I was proud of the honor of meeting with one of the heroes of Bunker's Hill—the first unconquerable champions of their country. He looked at me, pressed my hand in his, and the tears instantly glistened in his eyes, which as instantly called up corresponding ones in my own. In our way to the place he called on a Mr. Carter, who he said was also in the action, and might recollect some circumstances which he had forgotten. With these two veterans I spent three hours, the most interesting to me of any of my life. As they pointed out to me the route of the British—the American intrenchments—the place where the greatest slaughter was made—the spot where Warren fell, and where he was thrown amid heaps of the dead, I felt as though I could have encountered a whole battalion myself in the same glorious cause. The old soldiers were highly delighted with my enthusiasm; we drank a glass of wine to the memory of the illustrious dead, and parted almost with regret.

“From Boston to Portland, in the district of Maine, you are almost always in the neighborhood, or within sight, of the Atlantic. The country may be called a mere skeleton of rocks, and fields of sand, in many places entirely destitute of wood, except a few low scrubby junipers, in others covered with pines of a diminutive growth. On entering the tavern in Portland, I took up the newspaper of the day, in which I found my song of *Freedom and Peace*,* which I afterwards heard read before a numerous company (for the supreme court was sitting), with great emphasis, as a most excellent song; but I said nothing on the subject.

“From Portland I steered across the country for the northern parts of Vermont, among barren, savage, pine-covered mountains, through regions where nature and art have done infinitely less to make it a fit residence for man than any country I ever traversed. Among these dreary tracts I found winter had already commenced, and the snow several inches deep. I called at Dartmouth College, the president of which, as well as of all I visited in New England, subscribed. Though sick with a severe cold, and great fatigue, I continued my route to this place, passing and calling at great numbers of small towns in my way.

“The legislature is at present in session—the newspapers have to-day taken notice of my book, and inserted my advertisement—I shall call on the principal people—employ an agent among some of the booksellers in Albany, and return home by New York.”

Wilson, after tarrying at home a few days, departed to the southward, visiting every city and town of importance as far as Savannah, in the state of Georgia. This journey, being performed in the winter, and alone, was of course not attended with many travelling comforts; and, to avoid the inconveniences of a return by land, he embarked in a vessel, and arrived at New

* A certain military association of Philadelphia, being disposed to dignify the national celebration of this year, offered a gold medal for the best song which should be written for the occasion; and Wilson bore away the prize from many competitors.

York in the month of March, 1809. This was rather an unproductive tour; but few subscriptions being obtained.

TO MR. D. H. MILLER.

“WASHINGTON CITY, December 24th, 1808.

“Dear Sir.

“I sit down, before leaving this place, to give you a few particulars of my expedition. I spent nearly a week in Baltimore, with tolerable success, having procured sixteen subscribers there. In Annapolis I *passed* my book through both houses of the legislature: the wise men of Maryland stared and gaped, from bench to bench; but having never heard of such a thing as one hundred and twenty dollars for a *book*, the *ayes* for subscribing were *none*; and so it was unanimously determined in the *negative*. Nowise discouraged by this *sage* decision, I pursued my route through the tobacco fields, sloughs and swamps, of this illiterate corner of the state, to Washington, distant thirty-eight miles; and in my way opened fifty-five gates. I was forewarned that I should meet with many of these embarrassments, and I opened twenty-two of them with all the patience and philosophy I could muster; but when I still found them coming thicker and faster, my patience and philosophy both abandoned me, and I saluted every new gate (which obliged me to plunge into the mud to open it) with perhaps less Christian resignation than I ought to have done. The negroes there are very numerous, and most wretchedly clad; their whole covering, in many instances, assumes the appearance of neither coat, waistcoat, nor breeches, but a motley mass of coarse, dirty woollen rags, of various colors, gathered up about them. When I stopped at some of the negro huts to inquire the road, both men and women huddled up their filthy bundles of rags around them, with both arms, in order to cover their nakedness, and came out, very civilly, to show me the way.

“I cannot pretend, within the bounds of a letter, to give you a complete description of Washington. It consists of a great extent of confined commons, one-half of which is nearly level, and little higher than the Potomac; the other parts, on which the Capitol and President’s house are built, are high and commanding. The site is much better than I expected to find it; and is certainly a noble place for a great metropolis. I saw *one* brick house building, which is the only improvement, of that kind, going on at present. The taverns and boarding-houses here are crowded with an odd assemblage of characters. Fat placemen, expectants, contractors, petitioners, office-hunters, lumber-dealers, salt-manufacturers, and numerous other adventurers. Among the rest are deputations from different Indian nations, along our distant frontiers, who are come hither to receive their last *alms* from the President, previous to his retirement.

“The President received me very kindly. I asked for nobody to introduce me, but merely sent him in a line that I was there; when he ordered me to be immediately admitted. He has given me a letter to a gentleman in Virginia, who is to introduce me to a person there, who, Mr. Jefferson says, has spent his whole life in studying the manners of our birds; and from whom I am to receive a world of facts and observations. The President intended to send for this person himself; and to take down, from his mouth, what he knows on

the subject; thinking it a pity, as he says, that the knowledge he possesses should die with him. But he has intrusted the business to me; and I have promised him an account of our interview.

"All the subscribers I have gleaned here amount to seventeen. I shall set off, on finishing this letter, to Georgetown and Alexandria. I will write you, or some of my friends, from Richmond."

TO MR. D. H. MILLER.

"CHARLESTON, February 22d, 1809.

"Dear Sir.

"I have passed through a considerable extent of country since I wrote you last; and met with a variety of adventures, some of which may perhaps amuse you. Norfolk turned out better than I expected. I left that place on one of the coldest mornings I have experienced since leaving Philadelphia.

* * * * *

"I mentioned to you in my last that the streets of Norfolk were in a most disgraceful state; but I was informed that some time before, they had been much worse; that at one time the news-carrier delivered his papers from a boat, which he poled along through the mire; and that a party of sailors, having nothing better to do, actually launched a ship's long-boat into the streets, rowing along with four oars through the mud, while one stood at the bow, heaving the lead, and singing out the depth.

"I passed through a flat, pine-covered country, from Norfolk to Suffolk, twenty-four miles distant; and lodged, in the way, in the house of a planter, who informed me that every year, in August and September, almost all his family are laid up with the bilious fever; that at one time forty of his people were sick; and that of thirteen children, only three were living. Two of these, with their mother, appeared likely not to be long tenants of this world. Thirty miles farther, I came to a small place on the river Nottaway, called Jerusalem. Here I found the river swelled to such an extraordinary height, that the oldest inhabitant had never seen the like. After passing along the bridge, I was conveyed, in a boat termed a *flat*, a mile and three-quarters through the woods, where the torrent sweeping along in many places rendered this sort of navigation rather disagreeable. I proceeded on my journey, passing through solitary pine woods, perpetually interrupted by swamps, that covered the road with water two and three feet deep, frequently half a mile at a time, looking like a long river or pond. These in the afternoon were surmountable; but the weather being exceedingly severe, they were covered every morning with a sheet of ice, from half an inch to an inch thick, that cut my horse's legs and breast. After passing a bridge, I had many times to wade, and twice to swim my horse, to get to the shore. I attempted to cross the Roanoke at three different ferries, thirty-five miles apart, and at last succeeded at a place about fifteen miles below Halifax. A violent snow storm made the roads still more execrable.

"The productions of these parts of North Carolina are hogs, turpentine, tar, and apple brandy. A tumbler of toddy is usually the morning's beverage of the inhabitants, as soon as they get out of bed. So universal is the practice,

that the first thing you find them engaged in, after rising, is preparing the brandy *toddy*. You can scarcely meet a man whose lips are not parched and chopped or blistered with drinking this poison. Those who do not drink it, they say, are sure of the ague. I, however, escaped. The pine woods have a singular appearance, every tree being stripped, on one or more sides, of the bark, for six or seven feet up. The turpentine covers these parts in thick masses. I saw the people, in different parts of the woods, mounted on benches, chopping down the sides of the trees; leaving a trough or box in the tree for the turpentine to run into. Of hogs they have immense multitudes; one person will sometimes own five hundred. The leaders have bells round their necks; and every drove knows its particular call, whether it be a conch-shell, or the bawling of a negro, though half a mile off. Their owners will sometimes drive them for four or five days to a market, without once feeding them.

"The taverns are the most desolate and beggarly imaginable: bare, bleak, and dirty walls;—one or two old broken chairs, and a bench, form all the furniture. The white females seldom make their appearance; and every thing must be transacted through the medium of negroes. At supper, you sit down to a meal, the very sight of which is sufficient to deaden the most eager appetite; and you are surrounded by half a dozen dirty, half-naked blacks, male and female, whom any man of common scent might smell a quarter of a mile off. The house itself is raised upon props, four or five feet; and the space below is left open for the hogs, with whose charming vocal performance the wearied traveller is serenaded the whole night long, till he is forced to curse the hogs, the house, and everything about it.

"I crossed the river Taw at Washington, for Newbern, which stands upon a sandy plain, between the rivers Trent and Neuse, both of which abound with alligators. Here I found the shad fishery begun, on the 5th instant; and wished to have some of you with me to assist in dissecting some of the finest shad I ever saw. Thence to Wilmington was my next stage, one hundred miles, with only one house for the accommodation of travellers on the road; two landlords having been broken up with the fever.

"The general features of North Carolina, where I crossed it, are immense, solitary, pine savannas, through which the road winds among stagnant ponds, swarming with alligators; dark, sluggish creeks, of the color of brandy, over which are thrown high wooden bridges, without railings, and so crazy and rotten as not only to alarm one's horse, but also the rider, and to make it a matter of thanksgiving with both when they get fairly *over*, without going *through*; enormous cypress swamps, which, to a stranger, have a striking, desolate, and ruinous appearance. Picture to yourself a forest of prodigious trees, rising, as thick as they can grow, from a vast flat and impenetrable morass, covered for ten feet from the ground with reeds. The leafless limbs of the cypresses are clothed with an extraordinary kind of moss (*Tillandsia usneoides*), from two to ten feet long, in such quantities, that fifty men might conceal themselves in one tree. Nothing in this country struck me with such surprise as the prospect of several thousand acres of such timber, loaded, as it were, with many million tons of tow, waving in the wind. I attempted to penetrate several of these swamps, with my gun, in search of something new; but, except

in some chance places, I found it altogether impracticable. I coasted along their borders, however, in many places, and was surprised at the great profusion of evergreens, of numberless sorts; and a variety of berries that I knew nothing of. Here I found multitudes of birds that never winter with us in Pennsylvania, living in abundance. Though the people told me that the alligators are so numerous as to destroy many of their pigs, calves, hogs, &c., yet I have never been enabled to get my eye on one, though I have been several times in search of them with my gun. In Georgia, they tell me, they are ten times more numerous; and I expect some sport among them. I saw a dog at the river Santee, who swims across when he pleases, in defiance of these voracious animals; when he hears them behind him, he wheels round, and attacks them, often seizing them by the snout.* They generally retreat, and he pursues his route again, serving every one that attacks him in the same manner.* He belongs to the boatman; and, when left behind, always takes to the water.

"As to the character of the North Carolinians, were I to judge of it by the specimens which I met with in taverns, I should pronounce them to be the most ignorant, debased, indolent and dissipated portion of the union. But I became acquainted with a few such noble exceptions, that, for *their* sakes, I am willing to believe they are all better than they seemed to be.

"Wilmington contains about three thousand souls; and yet there is not one cultivated field within several miles of it. The whole country, on this side of the river, is a mass of sand, into which you sink up to the ankles; and hardly a blade of grass is to be seen. All about is pine barrens. * * * *

"From Wilmington I rode through solitary pine savannas, and cypress swamps, as before; sometimes thirty miles without seeing a hut, or human being. On arriving at the Wackamaw, Pedee, and Black river, I made long zigzags among the rich nabobs, who live on their rice plantations, amidst large villages of negro huts. One of these gentlemen told me that he had "*something better than six hundred head of blacks!*" These excursions detained me greatly. The roads to the plantations were so long, so difficult to find, and so bad, and the hospitality of the planters was such, that I could scarcely get away again. I ought to have told you that the deep sands of South Carolina had so worn out my horse, that, with all my care, I found he would give up. Chance led me to the house of a planter, named V., about forty miles north of the river Wackamaw, where I proposed to bargain with him, and to give up my

* This is an uncommon instance of intrepidity in the canine race, and is worthy of record. It is well known that the alligator is fond of dog-flesh; and the dog appears to be instructed by instinct to avoid so dangerous an enemy, it being difficult to induce him to approach the haunts of the alligator, even when encouraged by the example of his master. A fine stout spaniel accompanied me to East Florida. Being one day engaged in wading through a pond, in pursuit of ducks, with my dog swimming behind me, apparently delighted with his employment, he smelt an alligator: he immediately made to the shore, fled into the forest, and all my endeavors to prevail with him to return were ineffectual. Ever after, when we approached that pond, he exhibited such evidences of apprehension, that I was fain to retire with him, lest his terror should again induce him to flee, where he would have, probably, been lost.

young *blood horse* for another in exchange; giving him at least as good a character as he deserved. *He* asked twenty dollars to boot, and *I* thirty. We parted, but I could perceive that he had taken a liking to my steed; so I went on. He followed me to the seabeach, about three miles, under pretence of pointing out to me the road; and there, on the sands, amidst the roar of the Atlantic, we finally bargained; and I found myself in possession of a large, well formed and elegant sorrel horse, that ran off with me, at a canter, for fifteen miles along the sea shore; and travelled the same day forty-two miles, with nothing but a few mouthfuls of rice straw, which I got from a negro. If you have ever seen the rushes with which carpenters sometimes smooth their work, you may form some idea of the common fare of the South Carolina horses. I found now that I had got a very devil before my chair; the least sound of the whip made him spring half a rod at a leap; no road, however long or heavy, could tame him. Two or three times he had nearly broke my neck, and chair to boot; and at Georgetown ferry he threw one of the boatmen into the river. But he is an excellent traveller, and for that one quality I forgave him all his sins, only keeping a close rein, and a sharp look-out.

* * * *

"I should now give you some account of Charleston, with the streets of which I am as well acquainted as I was with those of New York and Boston; but I reserve that till we meet. I shall only say, that the streets cross each other at right angles—are paved on the sides—have a low bed of sand in the middle; and frequently are in a state fit to compare to those of Norfolk. The town, however, is neat—has a gay appearance—is full of shops; and has a market-place which far surpasses those of Philadelphia for cleanliness, and is an honor to the city. Many of the buildings have two, three, and four ranges of piazzas, one above another, with a great deal of gingerbread work about them. The streets are crowded with negroes; and their quarrels often afford amusement to the passengers. In a street called Broad street, I every day see a crowd of wretchedly clad blacks, huddled in a corner for sale: people handling them as they do black cattle. Here are female chimney sweeps; stalls with roasted sweet-potatoes for sale; and on the wharves clubs of blacks, male and female, sitting round fires, amid heaps of oyster-shells, cooking their victuals—these seem the happiest mortals on earth. The finest groups for a comic painter might every day be found here that any country can produce.

"The ladies of Charleston are dressed with taste; but their pale and languid countenances by no means correspond with their figures. * * * *

"To-morrow afternoon I shall set off for Savannah. I have collected one hundred and twenty-five subscribers since leaving home."

"SAVANNAH, March 5th, 1809.

"Dear Sir.

"I have now reached the *ne plus ultra* of my peregrinations, and shall return home by the first opportunity. Whether this shall be by land or water, depends on circumstances; if the former, I shall go by Augusta, where I am told twelve or fifteen subscribers may be procured. These, however, would

be insufficient to tempt me that way, for I doubt whether my funds would be sufficient to carry me through.

"The innkeepers in the southern states are like the vulturés that hover about their cities; and treat their *guests* as the others do their *carrion*: are as glad to see them, and pick them as bare. The last letter I wrote you was on my arrival in Charleston. I found greater difficulties to surmount there than I had thought of. I solicited several people for a list of names, but that abject and disgraceful listlessness and want of energy, which have unnerved the whites of all descriptions in these states, put me off from time to time, till at last I was obliged to walk the streets, and pick out those houses which, from their appearance, indicated wealth and taste in the occupants, and introduce myself. Neither M., Dr. R., nor any other that I applied to, gave me the least assistance, though they promised, and knew I was a stranger. I was going on in this way, when the keeper of the library, a Scotsman, a good man, whose name had been mentioned to me, made me out a list from the directory; and among these I spent ten days. The extreme servility, and superabundance of negroes, have ruined the energy and activity of the white population. M. appears to be fast sinking into the same insipidity of character, with a pretty good sprinkling of rapacity. In Charleston, however, I met with some excellent exceptions, among the first ranks of society; and the work excited universal admiration. Dr. D. introduced it very handsomely into the *Courier*. On hearing of General Wilkinson's arrival, I waited on him. He received me with kindness—said he valued the book highly—and paid me the twelve dollars; on which I took occasion to prognosticate my final success on receiving its *first fruits* from him.

"I will not tire you by a recital of the difficulties which I met with between Charleston and Savannah, by bad roads, and the extraordinary flood of the river Savannah, where I had nearly lost my horse, he having, by his restiveness, thrown himself overboard; and, had I not, at great personal risk, rescued him, he might have floated down to Savannah before me.

"I arrived here on Tuesday last, and advertised in the *Republican*, the editors of which interested themselves considerably for me, speaking of my book in their Thursday's paper with much approbation. The expense of advertising in the southern states is great; but I found it really necessary. I have now seen every person in this place and neighborhood, of use to be seen. Here I close the list of my subscriptions, obtained at a *price* worth more than five times their amount. But, in spite of a host of difficulties, I have gained my point; and should the work be continued in the style it has been begun, I have no doubt but we may increase the copies to four hundred. I have endeavored to find persons of respectability in each town, who will receive and deliver the volumes, without recompense, any further than allowing them to make the first selection. By this means the rapacity of *some* booksellers will be avoided.

"The weather has been extremely warm these ten days, the thermometer stood in the shade on Friday and Saturday last, at 78° and 79°. I have seen no frost since the 5th of February. The few gardens here are as green and luxuriant as ours are in summer—full of flowering shrubbery, and surrounded with groves of orange trees, fifteen and twenty feet high, loaded with fruit.

The streets are deep beds of heavy sand, without the accommodation of a foot pavement. I most sincerely hope that I may be able to return home by water; if not, I shall trouble you with one letter more."

TO MR. WILLIAM BARTRAM.

"SAVANNAH, March 5th, 1809.

"Three months, my dear friend, are passed since I parted from you in Kingsess. I have been travelling ever since; and one half of my journey is yet to be performed—but that half is homewards, and through old Neptune's dominions, where I trust I shall not be long detained. This has been the most arduous, expensive, and fatiguing expedition I ever undertook. I have, however, gained my point in procuring two hundred and fifty subscribers, in all, for my Ornithology; and a great mass of information respecting the birds that winter in the southern states, and some that never visit the middle states; and this information I have derived personally, and can therefore the more certainly depend upon it. I have, also, found several new birds, of which I can find no account in Linneus. All these things we will talk over when we meet.

* * * *

"I visited a great number of the rich planters on the rivers Santee and Pedee, and was much struck with the miserable swarms of negroes around them. In these rice plantations, there are great numbers of birds, never supposed to winter so far north, and their tameness surprised me. There are also many here that never visit Pennsylvania. Round Georgetown I also visited several rich planters, all of whom entertained me hospitably. I spent ten days in Charleston, still, in every place where I stopped a day or two, making excursions with my gun.

"On the commons, near Charleston, I presided at a singular feast. The company consisted of two hundred and thirty-seven Carrion Crows (*Vultur atratus*), five or six dogs, and myself, though I only kept order, and left the eating part entirely to the others. I sat so near to the dead horse, that my feet touched his, and yet at one time I counted thirty-eight vultures on and within him, so that hardly an inch of his flesh could be seen for them. Linneus and others have confounded this Vulture with the Turkey Buzzard, but they are two very distinct species.

"As far north as Wilmington, in North Carolina, I met with the Ivory-billed Woodpecker. I killed two, and winged a male, who alarmed the whole town of Wilmington, screaming exactly like a young child crying violently, so that everybody supposed I had a baby under the apron of my chair, till I took out the bird to prevent the people from stopping me. This bird I confined in the room I was to sleep in, and in less than half an hour he made his way through the plaster, the lath, and partly through the weather boards; and would have escaped, if I had not accidentally come in. The common people confound the *P. principalis* and *P. pileatus* together.

* * * *

"I am utterly at a loss in my wood rambles here, for there are so many trees, shrubs, plants, and insects, that I know nothing of. There are immense quantities of elegant butterflies, and other singular insects. I met with a

grasshopper so big that I took it for a bird; settles upon trees and bushes. I have kept a record of all the birds which I have seen or shot since I left home.

"This journey will be of much use to me, as I have formed acquaintance in almost every place who are able to transmit me information. Great numbers of our summer birds are already here; and many are usually here all winter.

"There is a Mr. Abbot here, who has resided in Georgia thirty-three years, drawing insects and birds. I have been on several excursions with him. He is a very good observer, and paints well. He has published, in London, one large folio volume of the Lepidopterous Insects of Georgia. It is a very splendid work. There is only one vessel here bound to New York; she sails some time next week, and I shall take my passage in her. I caught a fever here by getting wet; I hope the sea air, and sea-sickness, will carry it off."

"SAVANNAH, March 8th, 1809.

"Dear Sir.

"Having now visited all the towns within one hundred miles of the Atlantic, from Maine to Georgia, and done as much for this bantling book of mine as ever author did for any progeny of his brain, I now turn my wishful eye towards home. There is a charm, a melody in this little word *home*, which only those know, who have forsaken it to wander among strangers, exposed to dangers, fatigues, insults and impositions, of a thousand nameless kinds. Perhaps I feel the force of this idea rather more at present than usual, being indisposed with a slight fever these three days, which a dose of sea-sickness will, I hope, rid me of. The weather since my arrival in this place has been extremely warm for the season. The wind generally southwest, and the thermometer ranging between 75 and 82. To me it feels more intolerable than our summer heat in Philadelphia. The streets of Savannah are also mere beds of burning sand, without even a foot pavement; and until one learns to traverse them with both eyes and mouth shut, both are plentifully filled with showers and whirlwinds of sand. I was longer detained in Charleston than I expected, partly on account of the races, which occupied the minds of many I wished to visit, to the exclusion of everything else. At nine they were in bed; at ten breakfasting—dressing at eleven—gone out at noon, and not visible again until ten next morning. I met, however, with some excellent exceptions, among the first ranks of society, and my work excited universal admiration. Dr. D. introduced it very handsomely into the Courier.

"The indolence, want of energy, and dissipation, of the wealthy part of the community in that place, are truly contemptible. The superabundance of negroes in the southern states has destroyed the activity of the whites. The carpenter, bricklayer, and even the blacksmith, stand with their hands in their pockets, overlooking their negroes. The planter orders his servant to tell the overseer to see my horse fed and taken care of; the overseer sends another negro to tell the driver to send one of his hands to do it. Before half of this routine is gone through, I have myself unharnessed, rubbed down, and fed my horse. Everything must be done through the agency of these slovenly blacks. * * * These, however, are not one-tenth of the curses slavery has brought on the southern states. Nothing has surprised me more than the

cold melancholy reserve of the females, of the best families, in South Carolina and Georgia. Old and young, single and married, all have that dull frigid insipidity, and reserve, which is attributed to solitary old maids. Even in their own houses they scarce utter anything to a stranger but yes or no, and one is perpetually puzzled to know whether it proceeds from awkwardness or dislike. Those who have been at some of their balls say that the ladies hardly ever speak or smile, but dance with as much gravity as if they were performing some ceremony of devotion. On the contrary, the negro wenches are all sprightliness and gayety; and if report be not a defamer—(*here there is a hiatus in the manuscript*) which render the men callous to all the finer sensations of love, and female excellence.

“I will not detain you by a recital of my journey from Charleston to Savannah. In crossing the Savannah river, at a place called the Two Sisters’ Ferry, my horse threw himself into the torrent, and had I not, at the risk of my own life, rescued him, would have been drowned.”

Of the first volume of the Ornithology, only two hundred copies had been printed. But it was now thought expedient to strike off a new edition of three hundred more; as the increasing approbation of the public warranted the expectation of corresponding support.

TO MR. WM. BARTRAM.

“PHILADELPHIA, August 4th, 1809.

“The second volume of ‘American Ornithology’ being now nearly ready to go to press, and the plates in considerable forwardness, you will permit me to trespass on your time, for a few moments, by inquiring if you have anything interesting to add to the history of the following birds, the figures of which will be found in this volume.

* * * * *

“I have myself already said everything of the foregoing that my own observations suggested, or that I have been enabled to collect from those on whom I could rely. As it has fallen to my lot to be the biographer of the feathered tribes of the United States, I am solicitous to do full justice to every species; and I would not conceal one good quality that any one of them possesses. I have paid particular attention to the mocking-bird, humming-bird, king-bird and cat-bird; all the principal traits in their character I have delineated at full. If you have anything to add on either of them, I wish you would communicate it in the form of a letter, addressed particularly to me. Your favorable opinion of my work (if such you have) would, if publicly known, be of infinite service to me, and procure me many friends.*

* This instance of Wilson’s diffidence of his own talents and acquirements is too remarkable to be passed over without a note. He seemed to fear lest the intrinsic merit of his work should not be sufficient, of itself, to get it into notice; and therefore he solicited the favorable opinion of one, to whose judgment in these matters, he felt assured, the public paid a deference. Contrasted with this modest deportment, how contemptible is the vanity, and self-conceit, of those writers, who, whether they compose a superficial essay,

"I assure you, my dear friend, that this undertaking has involved me in many difficulties and expenses which I never dreamt of;* and I have never yet received one cent from it. I am, therefore, a volunteer in the cause of Natural History, impelled by nobler views than those of money. The second volume will be ready for delivery on the first of January next. I have received communications from many different parts of the United States; with some drawings, and offers of more. But these are rarely executed with such precision as is necessary for a work of this kind.

"Let me know if you have ever seen the nest of Catesby's *cowpen-bird*. I have every reason to believe that this bird never builds itself a nest, but, like the cuckoo of Europe, drops its eggs into the nests of other birds; and leaves the result to their mercy and management. I have found no less than six nests this season, with each a young cow-bird contained in it. One of these, which I had found in the nest of the Maryland yellow-throat, and which occupied the whole nest, I brought home, and put it into the cage of a crested red-bird, who became its foster-father, and fed, and reared it, with great affection. It begins to chant a little.

"I have just heard from our old friend M* *. He has not yet published the first number of his work; and Bonaparte has been so busy with cutting throats, and building bridges, in the forests of Austria, that the *Inspector of the Forests of France* has not yet received his appointment."

TO MR. WM. BARTRAM.

"October 11th, 1809.

"Thanks for your bird, so neatly stuffed, that I was just about to skin it. It is the *Rallus virginianus* of Turton, and agrees exactly with his description. The one in company was probably the female. Turton mentions four species as inhabitants of the United States. I myself have seen six. Mr. Abbot of Savannah showed me two new species. I found the *sora*, as the Virginians call it, in the rice flats near Savannah, in March. General Wilkinson told me that the *sora* was in multitudes at Detroit. Query—don't you think they breed in the north, like the rice-birds? Are not the European naturalists mistaken in saying that the reed-birds or rice-birds pass *from* the island of Cuba, in September, to Carolina? All the Spaniards with whom I have con-

for the transactions of a learned society, or compile a bald and meagre pamphlet, present themselves before the public with an air of importance, which should seem to demand that countenance and applause, as a matter of right, which true merit humbly requests as a favor!

* The great expense of the publication prevented the author from giving all his plates that finish which his taste and judgment would have approved; but that in some instances extraordinary pains were bestowed upon them, a cursory glance will render evident. I have Mr. Lawson's authority for asserting, that, so anxious was he to encourage his friend, frequently after computing the time spent upon perfecting his work, he found his reward did not amount to more than *fifty cents* per day.

From a note to this gentleman, I make the following extract, relating to the bald eagle:

"I hope you go on courageously with the eagle; let no expense deter you from giving it the freest and most masterly touches of your graver. I think we shall be able to offer it as a competitor with the best that this country or Europe can produce."

versed, say that these birds are seen in Cuba, early in the spring only, and again in October. And the people of the district of Maine, of all the New England states, and those who have lived on the river Illinois, declare that these birds breed there in vast numbers.

"I have many times been told that our small snow-bird (*fringilla hudsonia*) breeds in the Great Swamp, which I can hardly believe. When I was in Williamsburg, Virginia, Bishop Madison told me of a mountain, in the interior of that state, where they bred in multitudes. I have lately had the most positive assurances from a gentleman who lived on the ranges of the Alleghany, about two hundred and fifty miles distant, that he saw them there four months ago; and that they built their nests almost everywhere among the long grass. He said he took particular notice of them, as he had heard it said down here, that they changed to chipping-sparrows in summer. What think you of these matters?"

TO MR. WM. BARTRAM.

"PHILADELPHIA, November 11th, 1809.

"Dear Sir.

"Since I parted from you yesterday evening, I have ruminated a great deal on my proposed journey; I have considered the advantages and disadvantages of the three modes of proceeding: on horseback—in the stage-coach, and on foot. Taking everything into view, I have at length determined to adopt the last, as being the cheapest, the best adapted for examining the country we pass through; the most favorable to health; and, in short, except for its fatigues, the best mode for a scientific traveller or naturalist; in every point of view. I have also thought that by this determination I will be so happy as to secure your company, for which I would willingly sustain as much hardship, and as many deprivations, as I am able to bear.

"If this determination should meet your approbation, and if you are willing to encounter the hardships of such a pedestrian journey, let me know as soon as is convenient. I think one dollar a day, each, will be fully sufficient for our expenses, by a strict regard, at all times, to economy."

The second volume of the Ornithology was published in January, 1810; and Wilson set out for Pittsburgh, the latter part of the same month, in his route to New Orleans. I trust that no apology is necessary for introducing the following letters, addressed to Mr. Lawson, into these memoirs, notwithstanding three of them are well known to the public, having originally appeared in the Port Folio.*

TO MR. ALEXANDER LAWSON.

"PITTSBURGH, February 22d, 1810.

"Dear Sir.

"From this *first* stage of my Ornithological pilgrimage, I sit down, with pleasure, to give you some account of my adventures since we parted. On arriving at Lancaster, I waited on the governor, secretary of state, and such other great folks as were likely to be useful to me. The governor received me

* New Series, vols. III., 499, IV., 310, VII., 34.

with civility, passed some good-natured compliments on the volumes, and readily added his name to my list. He seems an active man, of plain good sense, and little ceremony. By Mr. L. I was introduced to many members of both houses, but I found them, in general, such a pitiful, squabbling, political mob; so split up, and justling about the mere formalities of legislation, without knowing anything of its realities, that I abandoned them in disgust. I must, however, except from this censure a few intelligent individuals, friends to science, and possessed of taste, who treated me with great kindness. On Friday evening I set out for Columbia, where I spent one day in vain. I crossed the Susquehanna on Sunday forenoon, with some difficulty, having to cut our way through the ice for several hundred yards; and passing on to York, paid my respects to all the literati of that place without success. Five miles north of this town lives a very extraordinary character, between eighty and ninety years of age, who has lived by trapping birds and quadrupeds these thirty years. Dr. F. carried me out in a sleigh to see him, and presented me with a tolerably good full length figure of him; he has also promised to transmit to me such a collection of facts relative to this singular original, as will enable me to draw up an interesting narrative of him for the Port Folio. I carried him half a pound of snuff, of which he is insatiably fond, taking it by handfuls. I was much diverted with the astonishment he expressed on looking at the plates of my work—he could tell me anecdotes of the greater part of the subjects of the first volume, and some of the second. One of his traps, which he says he invented himself, is remarkable for ingenuity, and extremely simple. Having a letter from Dr. Muhlenberg to a clergyman in Hanover, I passed on through a well cultivated country, chiefly inhabited by Germans, to that place, where a certain judge took upon himself to say, that such a book as mine *ought not to be encouraged, as it was not within the reach of the commonality; and therefore inconsistent with our republican institutions!* By the same mode of reasoning, which I did not dispute, I undertook to prove him a greater culprit than myself, in erecting a large, elegant, three-story brick house, so much beyond the reach of the *commonality*, as he called them, and consequently grossly contrary to our republican institutions. I harangued this Solomon of the Bench more seriously afterwards, pointing out to him the great influence of science on a young rising nation like ours, and particularly the science of Natural History, till he began to show such symptoms of *intellect*, as to seem ashamed of what he had said.

“From Hanover I passed through a thinly inhabited country; and crossing the North Mountain, at a pass called Newman’s Gap, arrived at Chambersburg, whence I next morning returned to Carlisle, to visit the reverend doctors of the college. * * * *

“The towns of Chambersburg and Shippensburg produced me nothing. On Sunday, the 11th, I left the former of these places in the stage-coach; and in fifteen miles began to ascend the Alpine regions of the Alleghany mountains, where above, around, and below us, nothing appeared but prodigious declivities, covered with woods; and, the weather being fine, such a profound silence prevailed among these aerial solitudes, as impressed the soul with awe, and a kind of fearful sublimity. Something of this arose from my being alone, hav-

ing left the coach several miles below. These high ranges continued for more than one hundred miles to Greensburg, thirty-two miles from Pittsburgh; thence the country is nothing but an assemblage of steep hills, and deep valleys, descending rapidly till you reach within seven miles of this place, where I arrived on the 15th instant. We were within two miles of Pittsburgh, when suddenly the road descends a long and very steep hill, where the Alleghany river is seen at hand, on the right, stretching along a rich bottom, and bounded by a high ridge of hills on the west. After following this road, parallel with the river, and about a quarter of a mile from it, through a rich low valley, a cloud of black smoke, at its extremity, announced the town of Pittsburgh. On arriving at the town, which stands on a low flat, and looks like a collection of blacksmith's shops, glasshouses, breweries, forges and furnaces, the Monongahela opened to the view, on the left, running along the bottom of a range of hills so high that the sun, at this season, sets to the town of Pittsburgh at a little past four: this range continues along the Ohio as far as the view reaches. The ice had just begun to give way in the Monongahela, and came down in vast bodies for the three following days. It has now begun in the Alleghany, and, at the moment I write, the river presents a white mass of rushing ice.

"The country beyond the Ohio, to the west, appears a mountainous and hilly region. The Monongahela is lined with arks, usually called Kentucky-boats, waiting for the rising of the river, and the absence of the ice, to descend. A perspective view of the town of Pittsburgh at this season, with the numerous arks and covered keel-boats preparing to descend the Ohio; its hills, its great rivers—the pillars of smoke rising from its furnaces and glass-works—would make a noble picture. I began a very diligent search in this place, the day after my arrival, for subscribers, and continued it for four days. I succeeded beyond expectation, having got nineteen names of the most wealthy and respectable part of the inhabitants. The industry of Pittsburgh is remarkable; everybody you see is busy; and as a proof of the prosperity of the place, an eminent lawyer told me that there has not been one suit instituted against a merchant of the town these three years.

* * * * *

"Gentlemen here assure me that the road to Chilicothe is impassable on foot by reason of the freshets. I have therefore resolved to navigate myself a small skiff, which I have bought, and named the ORNITHOLOGIST, down to Cincinnati, a distance of five hundred and twenty-eight miles; intending to visit five or six towns that lie in my way. From Cincinnati I will cross over to the opposite shore, and, abandoning my boat, make my way to Lexington, where I expect to be ere your letter can reach that place. Were I to go by Chilicothe, I should miss five towns, as large as it. Some say that I ought not to attempt going down by myself—others think I may. I am determined to make the experiment, the expense of hiring a rower being considerable. As soon as the ice clears out of the Alleghany, and the weather will permit, I shall shove off, having everything in readiness. I have ransacked the woods and fields here without finding a single bird new to me, or indeed anything but a few snow-birds and sparrows. I expect to have something interesting to communicate in my next.

* * * * *

"My friends will please accept through you my best wishes and kindest respects; and I regret that while the grand spectacle of mountains, regions of expanded forests, glittering towns, and noble rivers, are passing in rapid succession before my delighted view, they are not beside me to enjoy the varying scenery; but as far as my pen will enable me, I will freely share it with them, and remember *them* affectionately until I forget *myself*."

"February 23d. My baggage is on board—I have just to despatch this and set off. The weather is fine, and I have no doubt of piloting my skiff in safety to Cincinnati. Farewell! . God bless you!"

TO MR. ALEXANDER LAWSON.

"LEXINGTON, April 4th, 1810.

"My Dear Sir.

"Having now reached the *second* stage of my bird-catching expedition, I willingly sit down to give you some account of my adventures and remarks since leaving Pittsburgh; by the aid of a good map, and your usual stock of patience, you will be able to listen to my story, and trace all my wanderings. Though generally dissuaded from venturing by myself on so long a voyage down the Ohio, in an open skiff, I considered this mode, with all its inconveniences, as the most favorable to my researches, and the most suitable to my funds, and I determined accordingly. Two days before my departure, the Alleghany river was one wide torrent of broken ice, and I calculated on experiencing considerable difficulties on this score. My stock of provisions consisted of some biscuit and cheese, and a bottle of cordial presented me by a gentleman of Pittsburgh; my gun, trunk, and great-coat, occupied one end of the boat; I had a small tin occasionally to bale her, and to take my beverage from the Ohio with; and, bidding adieu to the smoky confines of Pitt, I launched into the stream, and soon winded away among the hills that everywhere enclose this noble river. The weather was warm and serene, and the river like a mirror, except where floating masses of ice spotted its surface, and which required some care to steer clear of; but these, to my surprise, in less than a day's sailing, totally disappeared. Far from being concerned at my new situation, I felt my heart expand with joy at the novelties which surrounded me; I listened with pleasure to the whistling of the Red-bird on the banks as I passed, and contemplated the forest scenery as it receded, with increasing delight. The smoke of the numerous sugar camps, rising lazily among the mountains, gave great effect to the varying landscape; and the grotesque log cabins, that here and there opened from the woods, were diminished into mere dog-houses by the sublimity of the impending mountains. If you suppose to yourself two parallel ranges of forest-covered hills, whose irregular summits are seldom more than three or four miles apart, winding through an immense extent of country, and enclosing a river half a mile wide, which alternately washes the steep declivity on one side, and laves a rich, flat, forest-clad bottom on the other, of a mile or so in breadth, you will have a pretty correct idea of the appearance of the Ohio. The banks of these rich flats are from twenty to sixty and eighty feet high, and even these last were within a few feet of being overflowed in December, 1808.

"I now stripped, with alacrity, to my new avocation. The current went about two and a half miles an hour, and I added about three and a half miles more to the boat's way with my oars. In the course of the day I passed a number of arks, or, as they are usually called, Kentucky boats, loaded with what it must be acknowledged are the most valuable commodities of a country; viz., men, women and children, horses and ploughs, flour, millstones, &c. Several of these floating caravans were loaded with store goods for the supply of the settlements through which they passed, having a counter erected, shawls, muslins, &c., displayed, and everything ready for transacting business. On approaching a settlement they blow a horn or tin trumpet, which announces to the inhabitants their arrival. I boarded many of these arks, and felt much interested at the sight of so many human beings, migrating like birds of passage to the luxuriant regions of the south and west. The arks are built in the form of a parallelogram, being from twelve to fourteen feet wide, and from forty to seventy feet long, covered above, rowed only occasionally by two oars before, and steered by a long and powerful one fixed above, as in the annexed sketch.

Ark.

*Barge for passing up stream.*

"The barges are taken up along shore by setting poles, at the rate of twenty miles or so a day; the arks cost about one hundred and fifty cents per foot, according to their length; and when they reach their places of destination, seldom bring more than one-sixth their original cost. These arks descend from all parts of the Ohio and its tributary streams, the Alleghany, Monongahela, Muskingum, Sciota, Miami, Kentucky, Wabash, &c., in the months of March, April, and May particularly, with goods, produce, and emigrants, the two former for markets along the river, or at New Orleans; the latter for various parts of Kentucky, Ohio, and the Indiana Territory. I now return to my own expedition. I rowed twenty odd miles the first spell, and found I should be able to stand it perfectly well. About an hour after night I put up at a miserable cabin, fifty-two miles from Pittsburgh, where I slept on what I supposed to be corn-stalks, or something worse; so, preferring the smooth bosom of the Ohio to this *brush heap*, I got up long before day, and, being under no apprehension of losing my way, I again pushed out into the stream. The landscape on each side lay in one mass of shade, but the grandeur of the projecting headlands and vanishing points, or lines, was charmingly reflected in the smooth glassy surface below. I could only discover when I was passing a clearing, by the crowing of cocks; and now and then, in more solitary places,

the big-horned owl made a most hideous hallooing, that echoed among the mountains. In this lonesome manner, with full leisure for observation and reflection, exposed to hardships all day, and hard berths all night, to storms of rain, hail, and snow, for it froze severely almost every night, I persevered, from the 24th of February to Sunday evening, March 17th, when I moored my skiff safely in Bear-Grass Creek, at the Rapids of the Ohio, after a voyage of seven hundred and twenty miles. My hands suffered the most; and it will be some weeks yet before they recover their former feeling and flexibility.

"It would be the task of a month to detail all the particulars of my numerous excursions, in every direction from the river. In Steubenville, Charles-town and Wheeling, I found some friends. At Marietta I visited the celebrated remains of Indian fortifications, as they are improperly called, which cover a large space of ground on the banks of the Muskingum. Seventy miles above this, at a place called Big-Grave Creek, I examined some extraordinary remains of the same kind there. The big grave is three hundred paces round at the base, seventy feet perpendicular, and the top, which is about fifty feet over, has sunk *in*, forming a regular concavity, three or four feet deep. This tumulus is in the form of a cone, and the whole, as well as its immediate neighborhood, is covered with a venerable growth of forest, four or five hundred years old, which gives it a most singular appearance. In clambering around its steep sides, I found a place where a large white-oak had been lately blown down, and had torn up the earth to the depth of five or six feet. In this place I commenced digging, and continued to labor for about an hour, examining every handful of earth with great care, but except some shreds of earthen ware, made of a coarse kind of gritty clay, and considerable pieces of charcoal, I found nothing else; but a person of the neighborhood presented me with some beads, fashioned out of a kind of white stone, which were found in digging on the opposite side of this gigantic mound, where I found the hole still remaining. The whole of an extensive plain a short distance from this is marked out with squares, oblongs and circles, one of which comprehends several acres. The embankments by which they are distinguished are still two or three feet above the common level of the field. The Big Grave is the property of a Mr. Tomlinson, or Tumblestone, who lives near, and who would not expend three cents to see the whole sifted before his face. I endeavored to work on his avarice, by representing the probability that it might contain valuable matters, and suggested to him a mode by which a passage might be cut into it level with the bottom, and by excavation and arching, a most noble cellar might be formed for keeping his turnips and potatoes. "All the turnips and potatoes I shall raise this dozen years," said he, "would not pay the expense." This man is no antiquary, or theoretical farmer, nor much of a practical one either I fear; he has about two thousand acres of the best land, and just makes out to live. Near the head of what is called the Long Reach, I called on a certain Michael Cressap, son to the noted Colonel Cressap, mentioned in Jefferson's Notes on Virginia. From him I received the head of a Paddle fish, the largest ever seen in the Ohio, which I am keeping for Mr. Peale, with various other curiosities. I took the liberty of asking whether Logan's accusation of his father having killed *all* his family, had any truth in it; but he

replied that it had not. Logan, he said, had been misinformed; he detailed to me all the particulars, which are too long for repetition, and concluded by informing me that his father died early in the revolutionary war, of the camp fever, near New York.

"Marietta stands on a swampy plain, which has evidently once been the ancient bed of the Muskingum, and is still occasionally inundated to the depth of five or six feet. A Mr. Putnam, son to the old general of Bunker's Hill memory, and Mr. Gillman and Mr. Fearing, are making great exertions here, in introducing and multiplying the race of merinos. The two latter gentlemen are about establishing works by steam, for carding and spinning wool, and intend to carry on the manufacture of broadcloth extensively. Mr. Gillman is a gentleman of taste and wealth, and has no doubts of succeeding. Something is necessary to give animation to this place, for since the building of ships has been abandoned here, the place seems on the decline.

"The current of the Muskingum is very rapid, and the ferry boat is navigated across in the following manner. A strong cable is extended from bank to bank, forty or fifty feet above the surface of the river, and fastened tight at each end. On this cable are two loose running blocks; one rope from the bow of the boat is fastened to the first of these blocks, and another from the after part of the boat to the second block, and by lengthening this last a diagonal direction is give to the boat's head, a little up stream, and the current striking forcibly and obliquely on her aft, she is hurried forward with amazing velocity without any manual labor whatever. I passed Blannerhasset's island after night, but the people were burning brush, and by the light I had a distinct view of the mansion house, which is but a plain frame of no great dimensions. It is now the property of a Mr. Miller from Lexington, who intends laying it chiefly in hemp. It is nearly three miles long, and contains about three hundred acres, half of which is in cultivation; but like all the rest of the numerous islands of the Ohio, is subject to inundations. At Galliopolis, which stands upon a high plain, and contains forty or fifty scattered houses, I found the fields well fenced and well cultivated, peach and apple orchards numerous, and a considerable appearance of industry. One-half of the original French settlers have removed to a tract of land opposite to the mouth of Sandy river. This town has one shop and two taverns; the mountains press in to within a short distance of the town. I found here another Indian mound planted with peach trees. On Monday, March 5th, about ten miles below the mouth of the great Sciota, where I saw the first flock of paroquets, I encountered a violent storm of wind and rain, which changed to hail and snow, blowing down trees and limbs in all directions; so that for immediate preservation I was obliged to steer out into the river, which rolled and foamed like a sea, and filled my boat nearly half full of water; and it was with the greatest difficulty I could make the least headway. It continued to snow violently until dusk, when I at length made good my landing at a place on the Kentucky shore, where I had perceived a cabin; and here I spent the evening in learning the art and mystery of bear-treeing, wolf-trapping, and wild-cat hunting, from an old professor. But notwithstanding the skill of this great master, the country here is swarming with wolves and wild-cats, black and brown; accord-

ing to this hunter's own confession he had lost sixty pigs since Christmas last; and all night long the distant howling of the wolves kept the dogs in a perpetual uproar of barking. This man was one of those people called squatters, who neither pay rent nor own land, but keep roving on the frontiers, advancing as the tide of civilized population approaches. They are the immediate successors of the savages, and far below them in good sense and good manners, as well as comfortable accommodations. An engraved representation of one of their cabins would form a striking embellishment to the pages of the *Port Folio*, as a specimen of the *first order of American Architecture*.

"Nothing adds more to the savage grandeur, and picturesque effect, of the scenery along the Ohio, than these miserable huts of human beings, lurking at the bottom of a gigantic growth of timber, that I have not seen equalled in any other part of the United States. And it is truly amusing to observe how dear and how familiar habit has rendered those privations, which must have been first the offspring of necessity. Yet none pride themselves more on their possessions. The inhabitants of these forlorn sheds will talk to you with pride of the richness of their soil, of the excellence and abundance of their country, of the healthiness of their climate, and the purity of their waters; while the only bread you find among them is of Indian corn, coarsely ground in a horse-mill, with half of the grains unbroken; even their cattle are destitute of stables and hay, and look like moving skeletons; their own houses worse than pig-sties; their clothes an assemblage of rags; their faces yellow, and lank with disease; and their persons covered with filth, and frequently garnished with the humors of the Scotch fiddle; from which dreadful disease, by the mercy of God, I have been most miraculously preserved. All this is the effect of laziness. The corn is thrown into the ground in the spring, and the pigs turned into the woods, where they multiply like rabbits. The labor of the squatter is now over till autumn, and he spends the winter in eating pork, cabbage and hoe-cakes. What a contrast to the neat farm, and snug, cleanly habitation, of the industrious settler, that opens his green fields, his stately barns, gardens and orchards, to the gladdened eye of the delighted stranger!

"At a place called Salt Lick, I went ashore to see the salt works, and to learn whether the people had found any further remains of an animal of the ox kind, one of whose horns, of a prodigious size, was discovered here some years ago, and is in the possession of Mr. Peale. They make here about one thousand bushels weekly, which sells at one dollar and seventy-five cents per bushel. The wells are from thirty to fifty feet deep, but nothing curious has lately been dug up. I landed at Maysville, or Limestone, where a considerable deal of business is done in importation for the interior of Kentucky. It stands on a high narrow plain between the mountains and the river, which is fast devouring the bank, and encroaching on the town; part of the front street is gone already, and unless some effectual means are soon taken, the whole must go by piecemeal. This town contains about one hundred houses, chiefly log and frames. From this place I set out on foot for Washington. On the road, at the height of several hundred feet above the present surface of the river, I found prodigious quantities of petrified shells, of the small cockle and fan-shaped kind, but whether marine remains or not am uncertain. I have since

found these petrified concretions of shells universal all over Kentucky, wherever I have been. The rocks look as if one had collected heaps of broken shells, and wrought them up among clay, then hardened it into stone. These rocks lie universally in horizontal strata. A farmer in the neighborhood of Washington assured me, that from seven acres he reaped at once eight thousand weight of excellent hemp, fit for market.

"Amidst very tempestuous weather, I reached the town of Cincinnati, which does honor to the name of the old Roman, and is the neatest and handsomest situated place I have seen since I left Philadelphia. You must know that during an unknown series of ages, the river Ohio has gradually sunk several hundred feet below its former bed, and has left on both sides, occasionally, what are called the first or nearest, and the second or next, high bank, the latter of which is never overflowed.

"The town of Cincinnati occupies two beautiful plains, one on the first, and the other on the second bank, and contains upwards of five hundred houses, the greater proportion of which are of brick. One block house is all that remains of Fort Washington. The river Licking comes in from the opposite shore, where the town of Newport, of forty or fifty houses, and a large arsenal and barracks are lately erected. Here I met with Judge Turner, a man of extraordinary talents, well known to the *literati* of Philadelphia. He exerted himself in my behalf with all the ardor of an old friend. A large Indian mound in the vicinity of this town has been lately opened by Doctor Drake, who showed me the collection of curiosities which he had found in that and others. In the centre of this mound he also found a large fragment of earthen ware, such as I found at the Big Grave, which is a pretty strong proof that these works had been erected by a people, if not the same, differing little from the present race of Indians, whose fragments of earthen ware, dug up about their late towns, correspond exactly with these. Twenty miles below this I passed the mouth of the Great Miami, which rushes in from the north, and is a large and stately river, preserving its pure waters uncontaminated for many miles with those of the Ohio, each keeping their respective sides of the channel. I rambled up the banks of this river for four or five miles, and in my return shot a turkey. I also saw five or six deer in a drove, but they were too light-heeled for me.

"In the afternoon of the 15th I entered Big-Bone Creek, which being passable only about a quarter of a mile, I secured my boat, and left my baggage under the care of a decent family near, and set out on foot five miles through the woods for the Big-Bone Lick, that great antediluvian rendezvous of the American elephants. This place, which lies "far in the windings of a sheltered vale," afforded me a fund of amusement in shooting ducks and paroquets (of which last I skinned twelve, and brought off two slightly wounded), and in examining the ancient buffalo roads to this great licking-place. Mr. Colquhoun, the proprietor, was not at home, but his agent and manager entertained me as well as he was able, and was much amused with my enthusiasm. This place is a low valley, everywhere surrounded by high hills; in the centre, by the side of the creek, is a quagmire of near an acre, from which, and another smaller one below, the chief part of these large bones have been taken; at

the latter places I found numerous fragments of large bones lying scattered about. In pursuing a wounded duck across this quagmire, I had nearly deposited my carcass among the grand congregation of mammoths below, having sunk up to the middle, and had hard struggling to get out. As the proprietor intends to dig in various places this season for brine, and is a gentleman of education and intelligence, I have strong hopes that a more complete skeleton of that animal called the mammoth, than has yet been found, will be procured. I laid the strongest injunctions on the manager to be on the lookout, and to preserve everything; I also left a letter for Mr. Colquhoun to the same purport, and am persuaded that these will not be neglected. In this neighborhood I found the Columbo plant in great abundance, and collected some of the seeds. Many of the old stalks were more than five feet high. I have since found it in various other parts of this country.

"In the afternoon of the next day I returned to my boat, replaced my baggage, and rowed twenty miles to the Swiss settlement, where I spent the night. These hardy and industrious people have now twelve acres closely and cleanly planted with vines from the Cape of Good Hope. They last year made seven hundred gallons of wine, and expect to make three times as much the ensuing season. Their houses are neat and comfortable, they have orchards of peach and apple trees, besides a great number of figs, cherries, and other fruit trees, of which they are very curious. They are of opinion that this part of the Indiana Territory is as well suited as any part of France to the cultivation of the vine, but the vines they say require different management here from what they were accustomed to in Switzerland. I purchased a bottle of their last vintage, and drank to all your healths as long as it lasted, in going down the river. Seven miles below this I passed the mouth of Kentucky river, which has a formidable appearance. I observed twenty or thirty scattered houses on its upper side, and a few below, many of the former seemingly in a state of decay. It rained on me almost the whole of this day, and I was obliged to row hard and drink healths to keep myself comfortable. My birds' skins were wrapped up in my great coat, and my own skin had to sustain a complete drenching, which, however, had no bad effects.

"This evening I lodged at the most wretched hovel I had yet seen. The owner, a meagre diminutive wretch, soon began to let me know of how much consequence he had formerly been; that he had gone through all the war with General Washington—had become one of his *life-guards*, and had sent many a British soldier to his long home. As I answered him with indifference, to interest me the more he began to detail anecdotes of his wonderful exploits; 'One grenadier,' said he, 'had the impudence to get up on the works, and to wave his cap in defiance; my commander (General Washington I suppose) says to me, 'Dick, says he, can't you pepper that there fellow for me?' says he. 'Please your honor,' says I, 'I'll try at it;' so I took a fair, cool and steady aim, and touched my trigger. Up went his heels like a turkey! down he tumbled! one buckshot had entered *here* and another *here* (laying a finger on each breast), and the bullet found the way to his brains right through his forehead. By God he was a noble-looking fellow!'

Though I believed every word of this to be a lie, yet I could not but look

with disgust on the being who uttered it. This same miscreant pronounced a long prayer before supper, and immediately after called out, in a splutter of oaths, for the pine splinters to be held to let the gentleman see. Such a far-rago of lies, oaths, prayers and politeness, put me in a good humor in spite of myself. The whole herd of this filthy kennel were in perpetual motion with the itch; so having procured a large fire to be made, under pretence of habit I sought for the softest plank, placed my trunk and great coat at my head, and stretched myself there till morning. I set out early and passed several arks. A number of turkeys which I observed from time to time on the Indiana shore, made me lose half the morning in search of them. On the Kentucky shore I was also decoyed by the same temptations, but never could approach near enough to shoot one of them. These affairs detained me so, that I was dubious whether I should be able to reach Louisville that night. Night came on, and I could hear nothing of the Falls; about eight I first heard the roaring of the Rapids, and as it increased I was every moment in hopes of seeing the lights of Louisville; but no lights appeared, and the noise seemed now within less than half a mile of me. Seriously alarmed, lest I might be drawn into the suction of the Falls, I cautiously coasted along shore, which was full of *snags* and *sawyers*, and at length, with great satisfaction, opened Bear-Grass Creek, where I secured my skiff to a Kentucky boat, and loading myself with my baggage, I groped my way through a swamp up to the town. The next day I sold my skiff for exactly half what it cost me; and the man who bought it wondered why I gave it such a droll Indian name, (the Ornithologist,) 'some old chief or warrior I suppose,' said he. This day I walked down along shore to Shippingport, to take a view of these celebrated Rapids, but they fell far short of my expectation. I should have no hesitation in going down them in a skiff. The Falls of Oswego, in the State of New York, though on a smaller scale, are far more dangerous and formidable in appearance. Though the river was not high, I observed two arks and a barge run them with great ease and rapidity. The Ohio here is something more than a mile wide, with several islands interspersed; the channel rocky, and the islands heaped with drift wood. The whole fall in two miles is less than twenty-four feet. The town of Louisville stands on a high *second* bank, and is about as large as Frankford, having a number of good brick buildings and valuable shops. The situation would be as healthy as any on the river, but for the numerous swamps and ponds that intersect the woods in its neighborhood. These from their height above the river might all be drained and turned into cultivation; but every man here is so intent on the immediate making of money, that they have neither time nor disposition for improvements, even where the article health is at stake. A man here told me that last fall he had fourteen sick in his own family. On Friday the 24th, I left my baggage with a merchant of the place to be forwarded by the first wagon, and set out on foot for Lexington, seventy-two miles distant. I passed through Middletown and Shelbyville, both inconsiderable places. Nine-tenths of the country is in forest; the surface undulating into gentle eminences and declivities, between each of which generally runs a brook, over loose flags of limestone. The soil, by appearance, is of the richest sort. I observed immense fields of Indian corn, high excellent fences,

few grain fields, many log houses, and those of the meaner sort. I took notice of few apple orchards, but several very thriving peach ones. An appearance of slovenliness is but too general about their houses, barns, and barn-yards. Negroes are numerous; cattle and horses lean, particularly the former, who appear as if struggling with starvation for their existence. The woods are swarming with pigs, pigeons, squirrels and woodpeckers. The pigs are universally fat, owing to the great quantity of mast this year. Walking here in wet weather is most execrable, and is like travelling on soft soap; a few days of warm weather hardens this again almost into stone. Want of bridges is the greatest inconvenience to a foot traveller here. Between Shelbyville and Frankfort, having gone out of my way to see a pigeon-roost, (which by-the-by is the greatest curiosity I have seen since leaving home), I waded a deep creek called Benson, nine or ten times. I spent several days in Frankfort, and in rambling among the stupendous cliffs of Kentucky river. On Thursday evening I entered Lexington. But I cannot do justice to these subjects at the conclusion of a letter, which, in spite of all my abridgments, has far exceeded in length what I first intended. My next will be from Nashville. I shall then have seen a large range of Kentucky, and be more able to give you a correct delineation of the country and its inhabitants. In descending the Ohio, I amused myself with a poetical narrative of my expedition, which I have called '*The Pilgrim*,' an extract from which shall close this long and I am afraid tiresome letter."

TO MR. ALEXANDER LAWSON.

"NASHVILLE, Tennessee, April 28th, 1810.

"My Dear Sir.

"Before setting out on my journey through the wilderness to Natchez, I sit down to give you, according to promise, some account of Lexington, and of my adventures through the state of Kentucky. These I shall be obliged to sketch as rapidly as possible. Neither my time nor my situation enables me to detail particulars with any degree of regularity; and you must condescend to receive them in the same random manner in which they occur, altogether destitute of fanciful embellishment; with nothing but their novelty, and the simplicity of truth, to recommend them.

"I saw nothing of Lexington till I had approached within half a mile of the place, when the woods opening, I beheld the town before me, on an irregular plain, ornamented with a small white spire, and consisting of several parallel streets, crossed by some others; many of the houses built of brick; others of frame, neatly painted; but a great proportion wore a more humble and inferior appearance. The fields around looked clean and well fenced; gently undulating, but no hills in view. In a hollow between two of these parallel streets, ran a considerable brook, that, uniting with a larger a little below the town, drives several mills. A large quarry of excellent building-stone also attracted my notice as I entered the town. The main street was paved with large masses from this quarry, the foot path neat, and guarded by wooden posts. The numerous shops piled with goods, and the many well dressed females I passed

in the streets; the sound of social industry, and the gay scenery of 'the busy haunts of men,' had a most exhilarating effect on my spirits, after being so long immured in the forest. My own appearance, I believe, was to many equally interesting; and the shopkeepers and other loungers interrogated me with their eyes as I passed, with symptoms of eager and inquisitive curiosity. After fixing my quarters, disposing of my arms, and burnishing myself a little, I walked out to have a more particular view of the place.

"This little metropolis of the western country is nearly as large as Lancaster in Pennsylvania. In the centre of the town is a public square, partly occupied by the court-house and market-place, and distinguished by the additional ornament of the pillory and stocks. The former of these is so constructed as to serve well enough, if need be, occasionally for a gallows, which is not a bad thought; for as nothing contributes more to make *hardened villains* than the pillory, so nothing so effectually rids society of them as the gallows; and every knave may here exclaim,

"My *bane* and *antidote* are both before me."

I peeped into the court-house as I passed, and though it was court day, I was struck with the appearance its interior exhibited; for, though only a plain square brick building, it has all the gloom of the Gothic, so much admired of late, by our modern architects. The exterior walls, having, on experiment, been found too feeble for the superincumbent honors of the roof and steeple, it was found necessary to erect, from the floor, a number of large, circular, and unplastered brick pillars, in a new order of architecture (the thick end uppermost), which, while they serve to impress the spectators with the perpetual dread that they will tumble about their ears, contribute also, by their number and bulk, to shut out the light, and to spread around a reverential gloom, producing a melancholy and chilling effect; a very good disposition of mind, certainly, for a man to enter a court of justice in. One or two solitary individuals stole along the damp and silent floor; and I could just desery, elevated at the opposite extremity of the building, the judges sitting, like spiders in a window corner, dimly distinguishable through the intermediate gloom. The market-place, which stands a little to the westward of this, and stretches over the whole breadth of the square, is built of brick, something like that of Philadelphia, but is unpaved and unfinished. In wet weather you sink over the shoes in mud at every step; and here again the wisdom of the police is manifest; as nobody at such times will wade in there unless forced by business or absolute necessity; by which means a great number of idle loungers are, very properly, kept out of the way of the market folks.

"I shall say nothing of the nature or quantity of the commodities which I saw exhibited there for sale, as the season was unfavorable to a display of their productions; otherwise something better than a few cakes of black maple sugar, wrapped up in greasy saddle-bags, some cabbage, chewing tobacco, catmint and turnip tops, a few bags of meal, sassafras-roots, and skinned squirrels cut up into quarters—something better than all this, I say, in the proper season, certainly

covers the stalls of this market-place, in the metropolis of the fertile country of Kentucky.*

"The horses of Kentucky are the hardiest in the world, not so much by nature as by education and habit. From the commencement of their existence they are habituated to every extreme of starvation and gluttony, idleness and excessive fatigue. In summer they fare sumptuously every day. In winter, when not a blade of grass is to be seen, and when the cows have deprived them of the very bark and buds of every fallen tree, they are ridden into town, fifteen or twenty miles, through roads and sloughs that would become the graves of any common animal, with a fury and celerity incomprehensible by you folks on the other side of the Alleghany. They are there fastened to the posts on the sides of the streets, and around the public square, where

* This letter, it should seem, gave offence to some of the inhabitants of Lexington; and a gentleman residing in that town, solicitous about its reputation, undertook, in a letter to the editor of the *Port Folio*, to vindicate it from strictures which he plainly insinuated were the offspring of ignorance, and unsupported by fact.

After a feeble attempt at sarcasm and irony, the letter-writer thus proceeds: "I have too great a respect for Mr. Wilson, as your friend, not to believe he had in mind some other market-house than that of Lexington, when he speaks of it as 'unpaved and unfinished!' But the people of Lexington would be gratified to learn what your ornithologist means by 'skinned squirrels cut up into quarters,' which curious anatomical preparations he enumerates among the articles he saw in the Lexington market. Does Mr. Wilson mean to *joke* upon us? If this is wit we must confess that, however abundant our country may be in good substantial matter-of-fact salt, the attic tart is unknown among us.

"I hope, however, soon to see this gentleman's American Ornithology. Its elegance of execution, and descriptive propriety, may assuage the little pique we have taken from the author."

The editor of the *Port Folio* having transmitted this letter to Wilson, previous to sending it to press, it was returned with the following note:

"TO THE EDITOR OF THE PORT FOLIO.

"Bartram's Gardens, July 16, 1811.

"Dear Sir.

"No man can have a more respectful opinion of the people of Kentucky, particularly those of Lexington, than myself; because I have traversed nearly the whole extent of their country, and witnessed the effects of their bravery, their active industry, and daring spirit for enterprise. But they would be gods, and not men, were they *faultless*.

"I am sorry that truth will not permit me to retract, as mere *jokes*, the few disagreeable things alluded to. I certainly had no other market-place in view, than that of Lexington, in the passage above mentioned. As to the circumstance of 'skinned squirrels, cut up into quarters,' which seems to have excited so much sensibility, I candidly acknowledge myself to have been incorrect in that statement, and I owe an apology for the same. On referring to my notes taken at the time, I find the word '*halves*,' not quarters; that is, those 'curious anatomical preparations' (skinned squirrels) were brought to market in the form of a saddle of venison; not in that of a leg or shoulder of mutton.

"With this correction, I beg leave to assure your very sensible correspondent, that the thing itself was no *joke*, nor meant for one; but, like all the rest of the particulars of that sketch, 'good substantial matter of fact.'

"If these explanations, or the perusal of my American Ornithology, should assuage the 'little pique' in the minds of the good people of Lexington, it will be no less honorable to their own good sense, than agreeable to your humble servant," &c. *Port Folio* for August, 1811.

hundreds of them may be seen, on a court day, hanging their heads from morning to night, in deep cogitation, ruminating perhaps on the long-expected return of spring and green herbage. The country people, to their credit be it spoken, are universally clad in plain homespun; soap, however, appears to be a scarce article; and Hopkins' *double cutters* would find here a rich harvest, and produce a very improving effect. Though religion here has its zealous votaries, yet none can accuse the inhabitants of this flourishing place of bigotry, in shutting out from the pale of the church or churchyard any human being, or animal whatever. *Some* of these sanctuaries are open at all hours, and to every visitor. The birds of heaven find a hundred passages through the broken panes; and the cows and hogs a ready access on all sides. The wall of separation is broken down between the living and the dead; and dogs tug at the carcass of the horse, on the grave of his master. Lexington, however, with all its faults, which a few years will gradually correct, is an honorable monument of the enterprise, courage, and industry of its inhabitants. Within the memory of a middle aged man, who gave me the information, there were only two log huts on the spot where this city is now erected; while the surrounding country was a wilderness, rendered hideous by skulking bands of bloody and ferocious Indians. Now, numerous excellent institutions for the education of youth, a public library, and a well-endowed university, under the superintendence of men of learning and piety, are in successful operation. Trade and manufactures are also rapidly increasing. Two manufactories for spinning cotton have lately been erected; one for woollen; several extensive ones for weaving sail-cloth and bagging; and seven ropewalks, which, according to one of the proprietors, export, annually, ropeyarn to the amount of 150,000 dollars. A taste for neat, and even elegant, buildings is fast gaining ground; and Lexington, at present, can boast of men who do honor to science, and of females whose beauty and amiable manners would grace the first circles of society.

"On Saturday, April 14th, I left this place for Nashville, distant about 200 miles. I passed through Nicholasville, the capital of Jessamine county, a small village begun about ten years ago, consisting of about twenty houses, with three shops and four taverns. The woods were scarcely beginning to look green, which to me was surprising, having been led by common report to believe that spring here is much earlier than in the lower parts of Pennsylvania. I must further observe, that, instead of finding the woods of Kentucky covered with a profusion of flowers, they were, at this time, covered with rotten leaves and dead timber, in every stage of decay and confusion; and I could see no difference between them and our own, but in the magnitude of the timber, and superior richness of the soil. Here and there the white blossoms of the *Sanguinaria canadensis*, or red root, were peeping through the withered leaves; and the buds of the buckeye, or horse chestnut, and one or two more, were beginning to expand. Wherever the hackberry had fallen, or been cut down, the cattle had eaten the whole bark from the trunk, even to that of the roots.

"Nineteen miles from Lexington, I descended a long, steep, and rocky declivity, to the banks of Kentucky river, which is here about as wide as the

Schuylkill; and winds away between prodigious perpendicular cliffs of solid limestone. In this deep and romantic valley the sound of the boat horns, from several Kentucky arks, which were at that instant passing, produced a most charming effect. The river, I was told, had already fallen fifteen feet; but was still high. I observed great numbers of uncommon plants and flowers, growing among the cliffs; and a few solitary bank swallows were skimming along the surface. Reascending from this, and travelling for a few miles, I again descended a vast depth to another stream called Dick's river, engulfed among the same perpendicular masses of rock. Though it was nearly dark, I found some curious petrifications, and some beautiful specimens of mother-of-pearl on the shore. The roaring of a mill-dam, and the rattling of the mill, prevented the ferryman from hearing me till it was quite night; and I passed the rest of the road in the dark, over a rocky country, abounding with springs, to Danville. This place stands on a slight eminence, and contains about eighty houses, chiefly log and frame buildings, disposed in two parallel streets, crossed by several others. It has two ropewalks and a woollen manufactory; also nine shops and three taverns. I observed a great many sheep feeding about here, amidst fields of excellent pasture. It is, however, but a dull place. A Roman Catholic chapel has been erected here, at the expense of one or two individuals. The shopkeepers trade from the mouth of Dick's river down to New Orleans, with the common productions of the country, flour, hemp, tobacco, pork, corn, and whiskey.

"I was now one hundred and eighty miles from Nashville, and, as I was informed, not a town or village on the whole route. Every day, however, was producing wonders in the woods, by the progress of vegetation. The blossoms of the sassafras, dog-wood, and red bud, contrasted with the deep green of the poplar and buckeye, enriched the scenery on every side; while the voices of the feathered tribes, many of which were to me new and unknown, were continually engaging me in the pursuit. Emerging from the deep solitude of the forest, the rich green of the grain-fields, the farm-house and cabins embosomed amidst orchards of glowing purple and white, gave the sweetest relief to the eye. Not far from the foot of a high mountain, called Mulders Hill, I overtook one of those family caravans so common in this country, moving to the westward. The procession occupied a length of road, and had a formidable appearance, though, as I afterwards understood, it was composed of the individuals of only a single family. In the front went a wagon drawn by four horses, driven by a negro, and filled with implements of agriculture; another heavy-loaded wagon, with six horses, followed, attended by two persons; after which came a numerous and mingled group of horses, steers, cows, sheep, hogs, and calves with their bells; next followed eight boys mounted double, also a negro wench with a white child before her; then the mother with one child behind her, and another at the breast; ten or twelve colts brought up the rear, now and then picking herbage, and trotting ahead. The father, a fresh, good-looking man, informed me that he was from Washington county, in Kentucky, and was going as far as Cumberland river; he had two ropes fixed to the top of the wagon, one of which he guided himself, and the other was intrusted to his eldest son, to keep it from oversetting in ascending the mountain. The singu-

lar appearance of this moving group, the mingled music of the bells, and the shoutings of the drivers, mixed with the echoes of the mountains, joined to the picturesque solitude of the place, and various reflections that hurried through my mind, interested me greatly; and I kept company with them for some time, to lend my assistance if necessary.

"The country now became mountainous, perpetually ascending and descending; and about forty-nine miles from Danville, I passed through a pigeon roost, or rather breeding-place, which continued for three miles, and, from information, extended in length for more than forty miles. The timber was chiefly beech; every tree was loaded with nests, and I counted, in different places, more than ninety nests on a single tree. Beyond this I passed a large company of people engaged in erecting a horse-mill for grinding grain. The few cabins I passed were generally poor; but much superior in appearance to those I met with on the shores of the Ohio. In the evening I lodged near the banks of Green river. This stream, like all the rest, is sunk in a deep gulf, between high, perpendicular walls of limestone; is about thirty yards wide at this place, and runs with great rapidity; but, as it had fallen considerably, I was just able to ford it without swimming. The water was of a pale greenish color, like that of the Licking, and some other streams, from which circumstance I suppose it has its name. The rocky banks of this river are hollowed out in many places into caves of enormous size, and of great extent. These rocks abound with the same masses of petrified shells so universal in Kentucky. In the woods, a little beyond this, I met a soldier, on foot, from New Orleans, who had been robbed and plundered by the Choctaws as he passed through their nation. 'Thirteen or fourteen Indians,' said he, 'surrounded me before I was aware, cut away my canteen, tore off my hat, took the handkerchief from my neck, and the shoes from my feet, and all the money I had from me, which was about forty-five dollars.' Such was his story. He was going to Chilicothe, and seemed pretty nearly *done up*.

"In the afternoon I crossed another stream of about twenty-five yards in width, called Little Barren; after which the country began to assume a new and very singular appearance. The woods, which had hitherto been stately, now degenerated into mere scrubby saplings, on which not a bud was beginning to unfold, and grew so open that I could see for a mile through them. No dead timber or rotting leaves were to be seen, but the whole face of the ground was covered with rich verdure, interspersed with a variety of very beautiful flowers, altogether new to me. It seemed as if the whole country had once been one general level; but that from some unknown cause, the ground had been *undermined*, and had *fallen in*, in innumerable places, forming regular, funnel-shaped, concavities of all dimensions, from twenty feet in diameter, and six feet in depth, to five hundred by fifty, the surface or verdure generally unbroken. In some tracts the surface was entirely destitute of trees, and the eye was presented with nothing but one general neighborhood of these concavities, or, as they are usually called, sink-holes. At the centre, or bottom of some of these, openings had been made for water. In several places these holes had broken in, on the sides, and even middle of the road, to an unknown depth; presenting their grim mouths as if to swallow up the unwary

traveller. At the bottom of one of those declivities, at least fifty feet below the general level, a large rivulet of pure water issued at once from the mouth of a cave about twelve feet wide and seven high. A number of very singular sweet smelling lichens grew over the entrance, and a pewee had fixed her nest, like a little sentry-box, on a projecting shelf of the rock above the water. The height and dimensions of the cave continued the same as far as I waded in, which might be thirty or forty yards, but the darkness became so great that I was forced to return. I observed numbers of small fish sporting about, and I doubt not but these abound even in its utmost subterranean recesses. The whole of this country from Green to Red river, is hollowed out into these enormous caves, one of which, lately discovered in Warren county, about eight miles from the Dripping Spring, has been explored for upwards of six miles, extending under the bed of the Green river. The entrance to these caves generally commences at the bottom of a sink-hole; and many of them are used by the inhabitants as cellars or spring-houses, having generally a spring or brook of clear water running through them. I descended into one of these belonging to a Mr. Wood, accompanied by the proprietor, who carried the light. At first the darkness was so intense that I could scarcely see a few feet beyond the circumference of the candle; but, after being in for five or six minutes, the objects around me began to make their appearance more distinctly, the bottom, for fifteen or twenty yards at first, was so irregular, that we had constantly to climb over large masses of wet and slippery rocks; the roof rose in many places to the height of twenty or thirty feet, presenting all the most irregular projections of surface, and hanging in gloomy and silent horror. We passed numerous chambers, or off-sets, which we did not explore; and after three hours' wandering in these profound regions of glooms and silence, the particulars of which would detain me too long, I emerged with a handkerchief filled with bats, including one which I have never seen described; and a number of extraordinary insects of the *Gryllus* tribe, with antennæ upwards of six inches long, and which I am persuaded had never before seen the light of day, as they fled from it with seeming terror, and I believe were as blind in it as their companions the bats.

"Great quantities of native glauber salts are found in these caves, and are used by the country people in the same manner, and with equal effect, as those of the shops. But the principal production is saltpetre, which is procured from the earth in great abundance. The cave in Warren county above mentioned, has lately been sold for three thousand dollars, to a saltpetre company, an individual of which informed me that, from every appearance, this cave had been known to the Indians many ages ago; and had evidently been used for the same purposes. At the distance of more than a mile from the entrance, the exploring party, on their first visit, found the roof blackened by smoke, and bundles of half-burnt canes scattered about. A bark moccasin, of curious construction, besides several other Indian articles, were found among the rubbish. The earth, also, lay piled in heaps, with great regularity, as if in preparation for extracting the saltpetre.

"Notwithstanding the miserable appearance of the timber on these barrens, the soil, to my astonishment, produced the most luxuriant fields of corn and

wheat I had ever before met with. But one great disadvantage is the want of water, for the whole running streams, with which the surface of this country evidently once abounded, have been drained off to a great depth, and now murmur among these lower regions, secluded from the day. One forenoon I rode nineteen miles without seeing water; while my faithful horse looked round, but in vain, at every hollow, with a wishful and languishing eye, for that precious element. These barrens furnished me with excellent sport in shooting grouse, which abound here in great numbers; and in the delightful groves that here and there rise majestically from these plains, I found many new subjects for my Ornithology. I observed all this day, far to the right, a range of high rocky detached hills, or knobs, as they are called, that skirt the barrens, as if they had been once the boundaries of the great lake that formerly covered this vast plain. These, I was told, abound with stone coal and copperas. I crossed Big Barren river in a ferry boat, where it was about one hundred yards wide; and passed a small village called Bowling Green, near which I rode my horse up to the summit of one of these high insulated rocky hills, or knobs, which overlooked an immense circumference of country, spreading around bare and leafless, except where the groves appeared, in which there is usually water.

“Fifteen miles from this, induced by the novel character of the country, I put up for several days, at the house of a pious and worthy Presbyterian, whence I made excursions, in all directions, through the surrounding country. Between this and Red river the country had a bare and desolate appearance. Caves continued to be numerous; and report made some of them places of concealment for the dead bodies of certain strangers, who had disappeared there. One of these lies near the banks of the Red river, and belongs to a person of the name of ———, a man of notoriously bad character, and strongly suspected, even by his neighbors, of having committed a foul murder of this kind, which was related to me with all its minutiae of horrors. As this man's house stands by the road side, I was induced, by motives of curiosity, to stop and take a peep of him. On my arrival I found two persons in conversation under the piazza, one of whom informed me that he was the landlord. He was a dark mulatto, rather above the common size, inclining to corpulency, with legs small in proportion to his size, and walked lame. His countenance bespoke a soul capable of deeds of darkness. I had not been three minutes in company when he invited the other man (who I understood was a traveller), and myself, to walk back and see his cave, to which I immediately consented. The entrance is in the perpendicular front of a rock, behind the house; has a door with a lock and key to it, and was crowded with pots of milk, placed near the running stream. The roof and sides of solid rock were wet and dropping with water. Desiring ——— to walk before with the lights, I followed with my hand on my pistol, reconnoitering on every side, and listening to his description of its length and extent. After examining this horrible vault for forty or fifty yards, he declined going any further, complaining of a rheumatism; and I now first perceived that the other person had stayed behind, and that we two were alone together. Confident in my means of self-defence, whatever mischief the devil might suggest to him, I

fixed my eyes steadily on his, and observed to him, that he could not be ignorant of the reports circulated about the country relative to this cave. 'I suppose,' said I, 'you know what I mean?' 'Yes, I understand you,' returned he, without appearing the least embarrassed, 'that I killed somebody and threw them into this cave—I can tell you the whole beginning of that damned lie,' said he; and, without moving from the spot, he detailed to me a long story, which would fill half my letter, to little purpose, and which, with other particulars, I shall reserve for your amusement when we meet. I asked him why he did not get the cave examined by three or four reputable neighbors, whose report might rescue his character from the suspicion of having committed so horrid a crime. He acknowledged it would be well enough to do so; but did not seem to think it worth the trouble; and we returned as we advanced, ——— walking before with the lights. Whether this man be guilty or not of the transaction laid to his charge I know not; but his manners and aspect are such as by no means to allay suspicion.

"After crossing Red river, which is here scarce twenty yards broad, I found no more barrens. The timber was large, and the woods fast thickening with green leaves. As I entered the state of Tennessee, the face of the country became hilly, and even mountainous. After descending an immense declivity, and coursing along the rich valley of Mausers creek, where I again met with large flocks of paroquets, I stopped at a small tavern, to examine, for three or four days, this part of the country. Here I made some interesting additions to my stock of new subjects for the Ornithology. On the fourth day I crossed the Cumberland, where it is about two hundred and fifty yards wide, and of great depth, bounded as usual with high precipitous banks, and reached the town of Nashville, which towers like a fortress above the river. Here I have been busily employed these eight days; and send you the enclosed parcel of drawings, the result of every moment of leisure and convenience I could obtain. Many of the birds are altogether new; and you will find along with them every explanation necessary for your purpose.

"You may rest assured of hearing from me by the first opportunity after my arrival at Natchez. In the mean time I receive with much pleasure the accounts you give me of the kind inquiries of my friends. To me nothing could be more welcome; for whether journeying in this world, or journeying to that which is to come, there is something of desolation and despair in the idea of being for ever forgotten in our absence, by those whom we sincerely esteem and regard."

TO MR. ALEXANDER LAWSON.

NATCHEZ, Mississippi Territory, May 18th, 1810.

"Dear Sir.

"About three weeks ago I wrote to you from Nashville, enclosing three sheets of drawings, which I hope you have received.* I was at that time on the point of setting out for St Louis; but being detained a week by constant and heavy rains, and considering that it would add four hundred miles to my jour-

* These drawings never came to hand.

ney, and detain me at least a month; and the season being already far advanced, and no subscribers to be expected there, I abandoned the idea, and prepared for a journey through the wilderness. I was advised by many not to attempt it alone; that the Indians were dangerous, the swamps and rivers almost impassable without assistance, and a thousand other hobgoblins were conjured up to dissuade me from going *alone*. But I weighed all these matters in my own mind; and attributing a great deal of this to vulgar fears and exaggerated reports, I equipped myself for the attempt. I rode an excellent horse, on which I could depend; I had a loaded pistol in each pocket, a loaded fowling piece belted across my shoulder, a pound of gunpowder in my flask, and five pounds of shot in my belt. I bought some biscuit and dried beef, and on Friday morning, May 4th, I left Nashville. About half a mile from town I observed a poor negro with *two* wooden legs, building himself a cabin in the woods. Supposing that this journey might afford you and my friends some amusement, I kept a particular account of the various occurrences, and shall transcribe some of the most interesting, omitting everything relative to my Ornithological excursions and discoveries, as more suitable for another occasion.

"Eleven miles from Nashville, I came to the Great Harpath, a stream of about fifty yards wide, which was running with great violence. I could not discover the entrance of the ford, owing to the rains and inundations. There was no time to be lost, I plunged in, and almost immediately my horse was swimming. I set his head aslant the current, and being strong, he soon landed me on the other side. As the weather was warm, I rode in my wet clothes without any inconvenience. The country to-day was a perpetual succession of steep hills and low bottoms; I crossed ten or twelve large creeks, one of which I swam with my horse, where he was near being entangled among some bad driftwood. Now and then a solitary farm opened from the woods, where the negro children were running naked about the yards. I also passed along the north side of a high hill, where the whole timber had been prostrated by some terrible hurricane. I lodged this night in a miner's, who told me he had been engaged in forming no less than thirteen companies for hunting mines, all of whom had left him. I advised him to follow his farm, as the surest vein of ore he could work.

"Next day (Saturday) I first observed the cane growing, which increased until the whole woods were full of it. The road this day winded along the high ridges of mountains that divide the waters of the Cumberland from those of the Tennessee. I passed few houses to-day; but met several parties of boatmen returning from Natchez and New Orleans; who gave me such an account of the road, and the difficulties they had met with, as served to stiffen my resolution to be prepared for everything. These men were as dirty as Hottentots; their dress a shirt and trowsers of canvas, black, greasy, and sometimes in tatters; the skin burnt wherever exposed to the sun; each with a budget, wrapped up in an old blanket; their beards, eighteen days old, added to the singularity of their appearance, which was altogether savage. These people came from the various tributary streams of the Ohio, hired at forty or fifty dollars a trip, to return back on their own expenses. Some had upwards of

eight hundred miles to travel. When they come to a stream that is unfordable, they coast it for a fallen tree: if that cannot be had, they enter with their budget on their head, and when they lose bottom, drop it on their shoulders, and take to swimming. They have sometimes fourteen or fifteen of such streams to pass in a day, and morasses of several miles in length, that I have never seen equalled in any country. I lodged this night at one Dobbins's, where ten or twelve of these men lay on the floor. As they scrambled up in the morning, they very generally complained of being unwell, for which they gave an odd reason, lying *within doors*, it being the first of fifteen nights they had been so indulged.

"Next morning (Sunday) I rode six miles to a man's, of the name of Grinder, where our poor friend Lewis perished.* In the same room where he expired, I took down from Mrs. Grinder the particulars of that melancholy event, which affected me extremely. This house, or cabin, is seventy-two miles from Nashville, and is the last white man's as you enter the Indian country. Governor Lewis, she said, came hither about sunset, alone, and inquired if he could stay for the night; and, alighting, brought his saddle into the house. He was dressed in a loose gown, white, striped with blue. On being asked if he came alone, he replied that there were two servants behind, who would soon be up. He called for some spirits, and drank a very little. When the servants arrived, one of whom was a negro, he inquired for his powder, saying he was sure he had some powder in a canister. The servant gave no distinct reply, and Lewis, in the meanwhile, walked backwards and forwards before the door, talking to himself. Sometimes, she said, he would seem as if he were walking up to her; and would suddenly wheel round, and walk back as fast as he could. Supper being ready, he sat down, but had eaten only a few mouthfuls when he started up, speaking to himself in a violent manner. At these times, she says, she observed his face to flush as if it had come on him in a fit. He lighted his pipe, and drawing a chair to the door sat down, saying to Mrs. Grinder, in a kind tone of voice, 'Madam, this is a very pleasant evening.' He smoked for some time, but quitted his seat and traversed the yard as before. He again sat down to his pipe, seemed again composed, and casting his eyes wistfully towards the west, observed what a sweet evening it was. Mrs. Grinder was preparing a bed for him; but he said he would sleep on the floor, and desired the servant to bring the bear-skins and buffalo robe, which were immediately spread out for him; and, it being now dusk, the women went off to the kitchen, and the two men to the barn, which stands about two hundred yards off. The kitchen is only a few paces from the room where Lewis was, and the woman, being considerably alarmed by the behavior of her guest, could not sleep, but listened to him walking backwards and for-

* It is hardly necessary to state, that this was the brave and enterprising traveller, whose journey across the Rocky Mountains, to the Pacific Ocean, has obtained for him well-merited celebrity. The *true* cause of his committing the rash deed, so feelingly detailed above, is not yet known to the public; but his friends will not soon forget the base imputations and cruel neglect, which the honorable mind of the gallant soldier knew not how to brook.

wards, she thinks, for several hours, and talking aloud, as she said, 'like a lawyer.' She then heard the report of a pistol, and something fall heavily on the floor, and the words '*O Lord!*' Immediately afterwards she heard another pistol, and in a few minutes she heard him at her door calling out '*O, madam! give me some water, and heal my wounds.*' The logs being open, and unplastered, she saw him stagger back and fall against a stump that stands between the kitchen and room. He crawled for some distance, and raised himself by the side of a tree, where he sat about a minute. He once more got to the room; afterwards he came to the kitchen door, but did not speak: she then heard him scraping the bucket with a gourd for water; but it appears that this cooling element was denied the dying man! As soon as day broke, and not before, the terror of the woman having permitted him to remain for two hours in this most deplorable situation, she sent two of her children to the barn, her husband not being at home, to bring the servants; and on going in they found him lying on the bed; he uncovered his side, and showed them where the bullet had entered; a piece of the forehead was blown off, and had exposed the brains, without having bled much. He begged they would take his rifle and blow out his brains, and he would give them all the money he had in his trunk. He often said, 'I am no coward; but I am *so* strong, *so* hard to die.' He begged the servant not to be afraid of him, for that he would not hurt him. He expired in about two hours, or just as the sun rose above the trees. He lies buried close by the common path, with a few loose rails thrown over his grave. I gave Grinder money to put a post fence round it, to shelter it from the hogs, and from the wolves; and he gave me his written promise he would do it. I left this place in a very melancholy mood, which was not much allayed by the prospect of the gloomy and savage wilderness which I was just entering alone.

* * * * *

"I was roused from this melancholy reverie by the roaring of Buffalo river, which I forded with considerable difficulty. I passed two or three solitary Indian huts in the course of the day, with a few acres of open land at each; but so wretchedly cultivated, that they just make out to raise maize enough to keep in existence. They pointed me out the distances by holding up their fingers. This is the country of the Chickasaws, though erroneously laid down in some maps as that of the Cherokees. I slept this night in one of their huts; the Indians spread a deer skin for me on the floor, I made a pillow of my portmanteau, and slept tolerably well; an old Indian laid himself down near me.

"On Monday morning I rode fifteen miles, and stopped at an Indian's to feed my horse. The sight of my paroquet brought the whole family around me. The women are generally naked from the middle upwards; and their heads, in many instances, being rarely combed, look like a large mop; they have a yard or two of blue cloth wrapped round by way of petticoat, that reaches to their knees—the boys were generally naked; except a kind of bag of blue cloth, by way of *fig-leaf*. Some of the women have a short jacket, with sleeves, drawn over their naked body, and the rag of a blanket is a general appendage. I met to-day two officers of the United States army, who gave me

a better account of the road than I had received. I passed through many bad swamps to-day; and at about five in the evening came to the banks of the Tennessee, which was swelled by the rains, and is about half a mile wide thirty miles below the Muscle Shoals, and just below a long island laid down in your small map. A growth of canes, of twenty and thirty feet high, covers the low bottoms; and these cane swamps are the gloomiest and most desolate looking places imaginable. I hailed for the boat as long as it was light, without effect; I then sought out a place to encamp, kindled a large fire, stripped the canes for my horse, eat a bit of supper, and lay down to sleep; listening to the owls, and the *Chuck-Wills-Widow*, a kind of *Whip-poor-Will*, that is very numerous here. I got up several times during the night to recruit my fire, and see how my horse did; and, but for the gnats, would have slept tolerably well. These gigantic woods have a singular effect by the light of a large fire; the whole scene being circumscribed by impenetrable darkness, except that in front, where every leaf is strongly defined, and deeply shaded.

"In the morning I hunted until about six, when I again renewed my shoutings for the boat, and it was not until near eleven that it made its appearance. I was so enraged at this delay, that, had I not been cumbered with baggage, I believe I should have ventured to swim the river. I vented my indignation on the owner of the boat, who is a half-breed, threatening to publish him in the papers, and advise every traveller I met to take the upper ferry. This man charges one dollar for man and horse, and thinks, because he is a chief, he may do in this way what he pleases. The country now assumed a new appearance; no brushwood—no fallen or rotten timber; one could see a mile through the woods, which were covered with high grass fit for mowing. These woods are burnt every spring, and thus are kept so remarkably clean, that they look like the most elegant noblemen's parks. A profusion of flowers, altogether new to me, and some of them very elegant, presented themselves to my view as I rode along. This must be a heavenly place for the botanist. The most observable of these flowers was a kind of Sweet William, of all tints, from white, to the deepest crimson. A superb Thistle, the most beautiful I had ever seen. A species of Passion flower, very beautiful. A stately plant of the Sunflower family—the button of the deepest orange, and the radiating petals bright carmine, the breadth of the flower about four inches. A large white flower like a deer's tail. Great quantities of the Sensitive plant, that shrunk instantly on being touched, covered the ground in some places. Almost every flower was new to me, except the Carolina Pink-root, and Colombo, which grew in abundance on every side. At Bear creek, which is a large and rapid stream, I first observed the Indian boys with their *blow-guns*. These are tubes of cane seven feet long, and perfectly straight, when well made. The arrows are made of slender slips of cane, twisted, and straightened before the fire, and covered for several inches at one end with the down of thistles, in a spiral form, so as just to enter the tube. By a puff they can send these with such violence as to enter the body of a partridge, twenty yards off. I set several of them a hunting birds by promises of reward, but not one of them could succeed. I also tried some of the blow-guns myself, but found them generally defective in straightness. I met six parties of boatmen to-day, and many straggling Indians, and

encamped about sunset near a small brook, where I shot a turkey, and on returning to my fire found four boatmen, who stayed with me all night, and helped to pick the bones of the turkey. In the morning I heard the turkeys gobbling all round me, but not wishing to leave my horse, having no great faith in my guests' honesty, I proceeded on my journey.

"This day (Wednesday) I passed through the most horrid swamps I had ever seen. These are covered with a prodigious growth of canes, and high woods, which together, shut out almost the whole light of day for miles. The banks of the deep and sluggish creeks, that occupy the centre, are precipitous, where I had often to plunge my horse seven feet down, into a bed of deep clay up to his belly; from which nothing but great strength and exertion could have rescued him; the opposite shore was equally bad, and beggars all description. For an extent of several miles, on both sides of these creeks, the darkness of night obscures every object around. On emerging from one of the worst of these, I met General Wade Hampton, with two servants, and a pack-horse, going, as he said, towards Nashville. I told him of the mud campaign immediately before him; I was covered with mire and wet, and I thought he looked somewhat serious at the difficulties he was about to engage. He has been very sick lately. About half an hour before sunset, being within sight of the Indian's where I intended to lodge, the evening being perfectly clear and calm, I laid the reins on my horse's neck, to listen to a Mocking-bird, the first I had heard in the western country, which, perched on the top of a dead tree before the door, was pouring out a torrent of melody. I think I never heard so excellent a performer. I had alighted, and was fastening my horse, when hearing the report of a rifle immediately beside me, I looked up and saw the poor Mocking-bird fluttering to the ground. One of the savages had marked his elevation, and barbarously shot him. I hastened over into the yard, and walking up to him, told him that was bad, very bad! That this poor bird had come from a far distant country to sing to him, and that in return he had cruelly killed him. I told him the Great Spirit was offended at such cruelty, and that he would lose many a deer for doing so. The old Indian, father-in-law to the bird-killer, understanding by the negro interpreter what I said, replied, that when these birds come singing and making a noise all day near the house, *somebody will surely die*—which is exactly what an old superstitious German, near Hampton in Virginia, once told me. This fellow had married the two eldest daughters of the old Indian, and presented one of them with the bird he had killed.

"The next day I passed through the Chickasaw *Big-town*, which stands on the high open plain, that extends through their country, three or four miles in breadth, by fifteen in length. Here and there you perceive little groups of miserable huts, formed of saplings, and plastered with mud and clay; about these are generally a few peach and plum trees. Many ruins of others stand scattered about, and I question whether there were twenty inhabited huts within the whole range of view. The ground was red with strawberries; and the boatmen were seen in straggling parties feasting on them. Now and then a solitary Indian, wrapped in his blanket, passed sullen and silent. On this plain are beds of shells, of a large species of clam, some of which are almost

entire. I this day stopped at the house of a white man, who had two Indian wives, and a hopeful string of young savages, all in their fig-leaves; not one of them could speak a word of English. This man was by birth a Virginian, and had been forty years among the Chickasaws. His countenance and manners were savage and worse than Indian. I met many parties of boatmen to-day, and crossed a number of bad swamps. The woods continued to exhibit the same open luxuriant appearance, and at night I lodged at a white man's, who has also two wives, and a numerous progeny of young savages. Here I met with a lieutenant of the United States army, anxiously inquiring for General Hampton.

"On Friday the same open woods continued; I met several parties of Indians, and passed two or three of their hamlets. At one of these were two fires in the yard, and at each, eight or ten Indians, men and women, squat on the ground. In these hamlets there is generally one house built of a circular form, and plastered thickly all over without and within with clay. This they call a *hot house*, and it is the general winter quarters of the hamlet in cold weather. Here they all kennel, and having neither window nor place for the smoke to escape, it must be a sweet place while forty or fifty of them have it in occupancy. Round some of these hamlets were great droves of cattle, horses and hogs. I lodged this night on the top of a hill far from water, and suffered severely for thirst.

"On Saturday I passed a number of most execrable swamps, the weather was extremely warm, and I had been attacked by something like the dysentery, which occasioned a constant burning thirst, and weakened me greatly. I stopped this day frequently to wash my head and throat in the water, to allay the burning thirst, and putting on my hat, without wiping, received considerable relief from it. Since crossing the Tennessee the woods have been interspersed with pine, and the soil has become more sandy. This day I met a Captain Hughes, a traveller, on his return from Santa Fe. My complaint increased so much that I could scarcely sit on horseback, and all night my mouth and throat were parched with a burning thirst and fever.

"On Sunday I bought some raw eggs which I ate. I repeated the dose at mid-day, and towards evening, and found great benefit from this simple remedy. I inquired all along the road for fresh eggs, and for nearly a week made them almost my sole food, till I completed my cure. The water in these cane swamps is little better than poison; and under the heat of a burning sun, and the fatigues of travelling, it is difficult to repress the urgent calls of thirst. On the Wednesday following, I was assailed by a tremendous storm of rain, wind and lightning, until I and my horse were both blinded by the deluge, and unable to go on. I sought the first most open place, and dismounting stood for half an hour under the most profuse heavenly *shower-bath* I ever enjoyed. The roaring of the storm was terrible; several trees around me were broken off, and torn up by the roots, and those that stood were bent almost to the ground: limbs of trees of several hundred weight flew past within a few yards of me, and I was astonished how I escaped. I would rather take my chance in a field of battle, than in such a tornado again.

"On the fourteenth day of my journey, at noon, I arrived at this place,

having overcome every obstacle, alone, and without being acquainted with the country; and what surprised the boatmen more, *without whiskey*. On an average I met from forty to sixty boatmen every day, returning from this place and New Orleans. The Chickasaws are a friendly, inoffensive people, and the Choctaws, though more reserved, are equally harmless. Both of them treated me with civility, though I several times had occasion to pass through their camps, where many of them were drunk. The paroquet which I carried with me was a continual fund of amusement to all ages of these people; and as they crowded around to look at it, gave me an opportunity of studying their physiognomies, without breach of good manners.

“In thus hastily running over the particulars of this journey, I am obliged to omit much that would amuse and interest you; but my present situation, a noisy tavern, crowded in every corner, even in the room where I write, with the sons of riot and dissipation, prevents me from enlarging on particulars. I could also have wished to give you some account of this place, and of the celebrated Mississippi, of which you have heard so much. On these subjects, however, I can at present only offer you the following slight sketch, taken the morning after my arrival here.

“The best view of this place and surrounding scenery, is from the old Spanish fort on the south side of the town, about a quarter of a mile distant. From this high point, looking up the river, Natchez lies on your right, a mingled group of green trees, and white and red houses, occupying an uneven plain, much washed into ravines, rising as it recedes from the bluff or high precipitous bank of the river. There is, however, neither steeple, cupola, nor distinguished object to add interest to its appearance. The country beyond it to the right is thrown up into the same irregular knolls; and at the distance of a mile, in the same direction, you have a peep of some cultivated farms, bounded by the general forest. On your left you look down, at a depth of two or three hundred feet, on the river, winding majestically to the south; the intermediate space exhibiting wild perpendicular precipices of brown earth. This part of the river and shore is the general rendezvous of all the arks or Kentucky boats, several hundreds of which are at present lying moored there, loaded with the produce of the thousand shores of this noble river. The busy multitudes below present a perpetually varying picture of industry; and the noise and uproar, softened by the distance, with the continual crowing of the poultry with which many of these arks are filled, produce cheerful and exhilarating ideas. The majestic Mississippi, swelled by his ten thousand tributary streams, of a pale brown color, half a mile wide, and spotted with trunks of trees, that show the different threads of the current and its numerous eddies, bears his depth of water past in silent grandeur. Seven gun-boats, anchored at equal distances along the stream, with their ensigns displayed, add to the effect. A few scattered houses are seen on the low opposite shore, where a narrow strip of cleared land exposes the high gigantic trunks of some deadened timber that bound the woods. The whole country beyond the Mississippi, from south round to west, and north, presents to the eye one universal level ocean of forest, bounded only by the horizon. So perfect is this vast level, that not a leaf seems to rise above the plain, as if shorn by the hands

of heaven. At this moment, while I write, a terrific thunder storm, with all its towering assemblage of black alpine clouds, discharging lightning in every direction, overhangs this vast level, and gives a magnificence and sublime effect to the whole."

The foregoing letters present us with an interesting account of our author's journey, until his arrival at Natchez, on the seventeenth of May. In his diary he says—"This journey, four hundred and seventy-eight miles from Nashville, I have performed alone, through difficulties, which those who have never passed the road could not have a conception of." We may readily suppose that he had not only difficulties to encounter, encumbered as he necessarily was with his shooting apparatus, and bulky baggage, but also dangers, in journeying through a frightful wilderness, where almost impenetrable cane-swamps and morasses present obstacles to the progress of the traveller, which require all his resolution and activity to overcome. Superadded to which, as we are informed, he had a severe attack of the dysentery, when remote from any situation which could be productive of either comfort or relief; and he was under the painful necessity of trudging on, debilitated and dispirited with a disease, which threatened to put a period to his existence. An Indian, having been made acquainted with his situation, recommended the eating of strawberries, which were then fully ripe, and in great abundance. On this delightful fruit, and newly laid eggs, taken raw, he wholly lived for several days; and he attributed his restoration to health to these simple remedies.

On the sixth of June our traveller reached New Orleans, distant from Natchez two hundred and fifty-two miles. As the sickly season was fast approaching, it was deemed advisable not to tarry long in this place; and his affairs being despatched, he sailed on the twenty-fourth in a ship bound to New York, at which place he arrived on the thirtieth of July; and soon reached Philadelphia, enriched with a copious stock of materials for his work, including several beautiful and hitherto unknown birds.*

In the newly settled country through which Wilson had to pass in his last journey, it was reasonable not to expect much encouragement in the way of

* The editor of Wilson's Poems, which were published at Paisley in 1816, gives what he states to be an extract from one of our author's letters to his father, wherein it is said that he had travelled through West Florida to New Orleans, and had "sailed thence to East Florida, furnished with a letter to the Spanish governor." This passage needs explanation. Wilson was never either in East or West Florida (except a small part of the latter province, through which the road to New Orleans passed); but, in the event of his going thither, had provided himself with a letter of introduction from Don Luis de Onís, the Spanish ambassador to the United States, to Don Enrique White, Governor of East Florida, and another to Don Vincente Folche, Governor of West Florida. In his passage from New Orleans to New York, he merely landed, for a few minutes, upon one or two desert islands lying in the Florida Gulf.

He departed from Philadelphia on the thirtieth of January, 1810; and returned on the second of August, of the same year. It is stated in his diary that the total amount of his expenses, until his arrival in New York, was the sum of four hundred and fifty-five dollars. This particular is given as a proof of how much may be performed, by a good economist, with slender means.

subscriptions. Yet he was not only honored with the names of some respectable individuals; but also received hospitable treatment from several persons, and those, too, to whom he had not been introduced. It is a singular fact, that from those to whom he had letters of introduction, and from whom most had been expected, he received the fewest acts of civility.

The principal events of his journey have been given in his letters; but I might select from his diary many interesting passages, if the limits allotted to this memoir would admit of copiousness of detail.

It is not unusual for scholars to keep diaries when they travel. These writings are commonly the objects of great curiosity, as we are all anxious to know what were the impressions which the incidents of a journey made upon the mind, when it was in the fittest state to receive them.

For the gratification of the reader, I will make a few short extracts from Wilson's journal, as specimens of his mode of writing these unstudied narratives.

March 9.—Visited a number of the literati and wealthy of Cincinnati, who all told me that they would think of it, viz. of subscribing: they are a very thoughtful people.

"March 17.—Rained and hailed all last night, set off at eight o'clock, after emptying my boat of the deluge of water. Rowed hard all day; at noon recruited myself with some biscuits, cheese and American wine. Reach the falls—night sets in—hear the roaring of the rapids. After excessive hard work arrive at Beargrass creek, and fasten my boat to a Kentucky one. Take my baggage and grope my way to Louisville—put up at the Indian Queen tavern, and gladly sit down to rest myself.

"March 18.—Rose quite refreshed. Found a number of land speculators here. Titles to lands in Kentucky subject to great disputes.

"March 19.—Rambling round the town with my gun. Examined Mr. —'s drawings in crayons—very good. Saw two new birds he had, both *Motacillæ*.

"March 20.—Set out this afternoon with the gun—killed nothing new. People in taverns here devour their meals. Many shopkeepers board in taverns—also boatmen, land speculators, merchants, &c. *No naturalist to keep me company.*

"March 21.—Went out this afternoon shooting with Mr. A. Saw a number of sandhill cranes. Pigeons numerous.

"March 23.—Packed up my things which I left in the care of a merchant here, to be sent on to Lexington; and having parted, with great regret, with my paroquet, to the gentlemen of the tavern, I bade adieu to Louisville, to which place I had four letters of recommendation, and was taught to expect much of everything there; but neither received one act of civility from those to whom I was recommended, one subscriber, nor *one new bird*; though I delivered my letters, ransacked the woods repeatedly, and visited all the characters likely to subscribe. *Science or literature has not one friend in this place.* Every one is so intent on making money that they can talk of nothing else;

and they absolutely devour their meals that they may return the sooner to their business. Their manners correspond with their features.

"Good country this for lazy fellows: they plant corn, turn their pigs into the woods, and in the autumn feed upon corn and pork—they lounge about the rest of the year.

"March 24.—Weather cool. Walked to Shelbyville to breakfast. Passed some miserable log-houses in the midst of rich fields. Called at a 'Squire O's, who was rolling logs. Sat down beside him, but was not invited in, though it was about noon.

"March 29.—Finding my baggage not likely to come on, I set out from Frankfort for Lexington. The woods swarm with pigs, squirrels, and woodpeckers. Arrive exceedingly fatigued.

"Wherever you go you hear people talking of buying and selling land; no readers, all traders. The Yankees, wherever you find them, are all traders. Found one here, a house carpenter, who came from Massachusetts, and brought some barrels of apples down the river from Pennsylvania to this town, where he employs the negro women to hawk them about the streets, at thirty-seven and a half cents per dozen.

"Restless, speculating set of mortals here, full of lawsuits, no great readers, even of politics or newspapers.

"The sweet courtesies of life, the innumerable civilities in deeds and conversation, which cost one so little, are seldom found here. Every man you meet with has either some land to buy or sell, some lawsuit, some coarse hemp or corn to dispose of; and if the conversation do not lead to any of these he will force it. Strangers here receive less civilities than in any place I have ever been in. The respect due to the fatigues and privations of travellers is nowhere given, because every one has met with as much, and thinks he has seen more than any other. No one listens to the adventures of another, without interrupting the narrative with his own; so that, instead of an auditor, he becomes a competitor in adventure-telling. So many adventurers, also, continually wandering about here, injure the manners of the people, for avarice and knavery prey most freely and safely upon passengers whom they may never meet again.

"These few observations are written in Salter White's garret, with little or no fire, wood being a scarce article here—the forests being a full *half* mile distant.

"April 9.—Court held to-day, large concourse of people; not less than one thousand horses in town, hitched to the side-posts—no food for them all day. Horses selling by auction. Negro woman sold same way: my reflections while standing by and hearing her cried, 'three hundred and twenty-five dollars for this woman and boy! going! going!' Woman and boy afterwards weep. Damned, damned slavery! this is one infernal custom which the Virginians have brought into this country. Rude and barbarous appearance of the crowd. Hopkins's double cutters much wanted here.

"April 10.—Was introduced to several young ladies this afternoon, whose agreeable society formed a most welcome contrast to that of the lower orders of the other sex. Mrs. * * *, an amiable, excellent lady; think that savage

ignorance, rudeness, and boorishness, were never so contrasted by female sweetness, affability, and intelligence.

"April 12.—Went this evening to drink tea with Mr. * * *; was introduced to Mrs. * * *, a most lovely, accomplished and interesting woman. Her good sense and lively intelligence of a cast far superior to that of almost any woman I have ever seen. She is most unfortunately unwell with a nervous complaint, which affects her head. She told me, most feelingly, that the spring, which brings joy to every other being, brings sorrow to her, for in winter she is always well.

"April 25.—Breakfasted at Walton's, thirteen miles from Nashville. This place is a fine, rich hollow, watered by a charming, clear creek, that never fails. Went up to Madison's Lick, where I shot three paroquets and some small birds.

"April 26.—Set out early, the hospitable landlord, ISAAC WALTON, refusing to take anything for my fare, or that of my horse, saying: '*You seem to be travelling for the good of the world; and I cannot, I will not charge you anything. Whenever you come this way, call and stay with me, you shall be welcome!*' This is the first instance of *such** hospitality which I have met with in the United States.

"Wednesday, May 23.—Left Natchez, after procuring twelve subscribers; and having received a kind letter of invitation from William Dunbar, Esq., I availed myself of his goodness, and rode nine miles along the usual road to his house; where, though confined to his bed by a severe indisposition, I was received with great hospitality and kindness; had a neat bedroom assigned me; and was requested to consider myself as at home during the time I should find it convenient to stay in exploring this part of the country."

The letter above mentioned, which is now before me, is worthy of transcription:

"FOREST, 20th May, 1810.

"Sir.

"It is very unfortunate that I should be so much indisposed as to be confined to my bedroom; nevertheless, I cannot give up the idea of having the pleasure of seeing you as soon as you find it convenient; the perusal of your first volume of Ornithology, lent me by General Wilkinson, has produced in me a very great desire of making your acquaintance.

"I understand, from my boy, that you propose going in a few days to New Orleans, where you will see some small cabinets of natural history that may interest you. But, as I presume it is your intention to prosecute your inquiries into the interior of our country, this cannot be done better than from my house, as your head-quarters; where everything will be made convenient to your wishes. My house stands literally in the forest, and your beautiful orioles, with other elegant birds, are our courtyard companions.

* The editor of Wilson's Poems, in quoting this paragraph, omitted the word *such*, thereby intending to convey a charge of the want of hospitality in the American character, which our author rarely experienced. Wilson's meaning is sufficiently obvious, without comment.

"The bearer attends you, with a couple of horses, on the supposition that it may be convenient for you to visit us to-day; otherwise he shall wait upon you any other day that you shall appoint.

"I am respectfully, &c.,

"WILLIAM DUNBAR."

This excellent gentleman, whose hospitality was thus promptly excited, has since paid the debt of nature; and his grateful guest fondly cherished, to the last hour of his existence, the remembrance of those happy moments which had been passed in his society, and that of his amiable and accomplished family.

TO MR. WILLIAM BARTRAM.

"PHILADELPHIA, September 2d, 1810.

"Incessant labor since my return, to make up my loss of drawings, which were sent by post from Nashville, has hitherto prevented me from paying you a visit. I am closely engaged on my third volume. Any particulars relative to the history of the meadow-lark, crow black-bird, snow-bunting, cuckoo, paroquet, nonpareil, pinnated grouse, or blue grosbeak, if interesting, would be received by me with much pleasure. I have lately received from Michaux a number of rich specimens of birds, printed in colors. I have since made some attempts at this kind of printing, and have succeeded tolerably well.

"Michaux has published several numbers of his *American Sylva*, in Paris, with colored plates. I expect them here soon.

"I collected a number of entire new species in my south-western tour; and in my return I visited several of the islands off the Florida shore, where I met with some very curious land birds.

"Mr. Dunbar, of Natchez, remembered you very well, and desired me to carry his good wishes to you."

TO MR. WM. DUNCAN, FRANKFORD, PENN.

"PHILADELPHIA, February 12th, 1811.

"So you have once more ascended the preceptor's rostrum, to wield the terrors of the *taws* and *hickory*. Trying as this situation is, and various and distracting as its avocations sometimes undoubtedly are, it is elysium to the scenes which you have lately emerged from; and as far transcends these latter, as honorable independence towers above despised and insulted servitude. You wish me to suggest any hints I may think proper for your present situation. Your own experience and prudence render anything I could advise unnecessary, as it is all included in the two resolutions which you have already taken; first, to distinguish, as clearly as possible, the whole extent of your duty; and, secondly, to fulfil every item of that to the best of your abilities. Accordingly, the more extensive and powerful these are, the greater good you will be capable of doing; the higher and more dignified will your reputation be; and the easier and calmer will your deportment be, under every circumstance of duty. You have but these two things to surmount, and the whole routine of teaching will become an agreeable amusement; and every closing day will shed over your mind that blissful tranquillity, 'which nothing earthly gives or can destroy.'

"Devote your whole time, except what is proper for needful exercise, to rendering yourself completely master of your business. For this purpose rise by the peep of dawn; take your regular walk; and then commence your stated studies. Be under no anxiety to hear what people think of you, or of your tutorship; but study the improvement, and watch over the good conduct, of their children consigned to your care, as if they were your own. Mingle respect and affability with your orders and arrangements. Never show yourself feverish or irritated; but preserve a firm and dignified, a just and energetic deportment, in every emergency. To be completely master of one's business, and ever anxious to discharge it with fidelity and honor, is to be great, beloved, respectable, and happy.

"I could have wished that you had been accommodated with a room and boarding in a more private and retired situation, where your time and reflections would have been more your own; and perhaps these may be obtained hereafter. Try to discover your own defects, and labor with all your energy to supply them. Respect yourself, and fear nothing but *vice* and *illness*. If one had no other reward for doing one's duty, but the grateful sensations arising therefrom on the retrospection, the recompense would be abundant, as these alone are able to bear us up amidst every reverse.

* * * * *

"At present I cannot enlarge further, my own mind being harassed with difficulties relative to my publication. I have now no further dependence on Murray; and I mean to make it consistent both with the fame, and the interest, of Lawson to do his best for me. I hope you will continue to let me hear from you, from time to time. I anticipate much pleasure from the improvements which I have no doubt you will now make in the several necessary departments of your business. Wishing you every success in your endeavors to excel, I remain, with sincere regard, &c."

In the early part of the year 1812, Wilson published his fifth volume; and, as the preface is interesting, we here insert an extract from it, for the gratification of the reader.

"The fifth volume of this extensive work is submitted to the public with all due deference and respect; and the author having now, as he conjectures, reached the middle stage of his journey, or in traveller's phrase, the 'half-way house,' may be permitted to indulge himself with a slight retrospect of the ground he has already traversed, and a glimpse of that which still lies before him.

"The whole of our Land Birds (those of the sixth volume included, which are nearly ready for the press) have now been figured and described, probably a very few excepted, which, it is hoped, will also shortly be obtained. These have been gleaned up from an extensive territory of woods and fields, unfrequented forests, solitary ranges of mountains, swamps and morasses, by successive journeys and excursions of more than ten thousand miles. With all the industry which a single individual could possibly exert, several species have doubtless escaped him. These, future expeditions may enable him to procure; or the kindness of his distant literary friends obligingly supply him with.

"In endeavoring to collect materials for describing truly and fully our feathered tribes, he has frequently had recourse to the works of those European naturalists who have written on the subject; he has examined their pages with an eager and inquisitive eye; but his researches in that quarter have been but too frequently repaid with disappointment, and often with disgust. On the subject of the *manners* and *migrations* of our birds, which in fact constitute almost the only instructive and interesting parts of their history, all is a barren and a dreary waste. A few vague and formal particulars of their size, specific marks, &c., accompanied sometimes with figured representations that would seem rather intended to caricature than to illustrate their originals, is all that the greater part of them can boast of. Nor are these the most exceptionable parts of their performances; the novelty of fable, and the wildness of fanciful theory, are frequently substituted for realities; and *conjectures* instead of *facts* called up for their support. Prejudice, as usual, has in numerous instances united with its parent, ignorance, to depreciate and treat with contempt what neither of them understood; and the whole interesting assemblage of the feathered tribes of this vast continent, which in richness of plumage, and in strength, sweetness and variety of song, will be found to exceed those of any other quarter of the globe, are little known save in the stuffed cabinets of the curious, and among the abstruse pages and technical catalogues of dry systematic writers.

"From these barren and musty records, the author of the present work has a thousand times turned with a delight bordering on adoration, to the magnificent repository of the woods and fields—the *Grand Aviary of Nature*. In this divine school he has studied from no vulgar *copy*; but from the works of the GREAT MASTER OF CREATION himself; and has read with rapture the lessons of his wisdom, his goodness and his love, in the conformation, the habits, melody and migrations of this beautiful portion of the work of his hands. To communicate as correct ideas of these as his feeble powers were capable of, and thus, from objects, that, in our rural walks, almost everywhere present themselves, to deduce not only amusement and instruction, but the highest incitements to virtue and piety, have been the author's most anxious and ardent wish. On many of his subjects, indeed, it has not been in his power to say much. The recent discovery of some, and the solitary and secluded habits of others, have opposed great obstacles to his endeavors in this respect. But a time is approaching when these obstacles will no longer exist. When the population of this immense western Republic will have diffused itself over every acre of ground fit for the comfortable habitation of man—when farms, villages, towns and glittering cities, thick as the stars in a winter's evening, overspread the face of our beloved country, and every hill, valley and stream has its favorite name, its native flocks and rural inhabitants; then, not a warbler shall flit through our thickets, but its name, its notes and habits will be familiar to all; repeated in their sayings, and celebrated in their village songs. At that happy period, should any vestige or memory of the present publication exist, be it known to our more enlightened posterity, as some apology for the deficiencies of its author, that in the period in which he wrote, three-fourths of our feathered tribes were altogether unknown even to the proprietors

of the woods which they frequented—that without patron, fortune or recompense, he brought the greater part of these from the obscurity of ages, gave to each ‘a local habitation and a name’—collected from personal observation whatever of their characters and manners seemed deserving of attention; and delineated their forms and features, in their native colors, as faithfully as he could, as records, at least, of their existence.

“In treating of those birds more generally known, I have endeavored to do impartial justice to their respective characters. Ignorance and stubborn-rooted opinions, even in this country, have rendered some odious that are eminently useful; and involved the manners of others in fable and mystery, which in themselves are plain and open as day. To remove prejudices when they oppose themselves to the influence of humanity is a difficult, but, when effected, a most pleasing employment. If therefore, in divesting this part of the natural history of our country of many of its fables and most forbidding features, and thus enabling our youth to become more intimately acquainted with this charming portion of the feathered creation, I should have succeeded in multiplying their virtuous enjoyments, and in rendering them more humane to those little choristers, how gratifying to my heart would be the reflection! For to me it appears that, of all inferior creatures, Heaven seems to have intended birds as the most cheerful associates of man; to soothe and exhilarate him in his labors by their varied melody, of which no other creature, but man, is capable; to prevent the increase of those supernumerary hosts of insects that would soon consume the products of his industry; to glean up the refuse of his fields, ‘that nothing be lost,’ and, what is of much more interest, to be to him the most endearing examples of the tenderest connubial love and parental affection.”

TO MR. F. A. MICHAUX.

“PHILADELPHIA, June 6th, 1812.

“My Dear Friend.

“I had the pleasure of receiving a letter from you, dated April 10, 1812; but, living at Mr. Bartram’s, I have not yet seen Mr. Correa, the gentleman who brought it over. I have also had the great satisfaction of examining the plates of your four numbers of *Forest Trees*, which are beautifully executed; and I regret most sincerely that my little knowledge of the French language* prevents me from perusing with equal satisfaction the interesting particulars you relate of their history. I expected long before this to be able to congratulate you on the publication of a translation of your work here, and I announced the same in the preface to one of my volumes; but sorry I am to inform you that no steps have yet been taken to put that design in execution, and I fear none will be taken for many months to come. Unless there be an evident certainty of profit, booksellers, in general, are very indifferent to publish

* Wilson’s ignorance of French was a great disadvantage to him; and he never ceased to regret his want of instruction in a tongue, which is considered not only important to the scholar, but indispensable to the naturalist. The number of works, in the various departments of Natural History, which France annually produces, is truly astonishing; and fortunate is that student whose acquirements in her language enable him to profit of the knowledge of this illustrious nation.

works of any kind, however great their merits may be; and the poor author's feelings are little regarded. Few men have known this more experimentally than myself. I have sacrificed everything to publish my Ornithology—have written six volumes, and am engaged on the seventh. * * *

"I have frequently conversed with Mr. Bradford about publishing a translation of your Forest Trees; and you may rest assured that, should it be undertaken, I will use all my influence in its favor. Were you here yourself, I have no doubt but it would be undertaken, and I think with success, for all who have seen it admire it. I procured our good friend, Mr. Wm. Bartram, a sight of it, and he was greatly delighted with its appearance. One of my friends read a great part of it in *English* to him, and he was highly satisfied. * * *

"Dr. Barton has not yet published his *General Zoology*,* which he has been announcing, from time to time, for so many years. It is much easier to *say* these things than *do* them. * * *

"Mr. Wm. Bartram is still as you left him, and you are frequently the subject of our conversation at table. I have made many extensive excursions lately, and have discovered, in all, about *forty* new species of Land Birds, never taken notice of by any other writer. I am now engaged on the Water Birds; and had just returned yesterday from the seashore when your letter was presented to me. Dr. H. and Mr. P. have both publicly announced your work, but, as no translation has been yet made, it has not been reviewed by any of our writers. * * *

"Wishing you all the success which is justly due to the labors, journeys, and investigations, you have made in behalf of Natural History, I remain, &c."

In September, 1812, Wilson undertook a journey into the eastern states, for the purpose of visiting his subscribers, and settling accounts with his agents.

TO MR. GEORGE ORD.

"BOSTON, October 13th, 1812.

"Dear Sir.

"It is not in my power at present to give you anything more than a slight sketch of my rambles since leaving Philadelphia. My route up the Hudson afforded great pleasure, mingled with frequent regret that you were not along with me, to share the enjoyment. About thirty miles south of Albany we passed within ten miles of the celebrated Catskill Mountains, a gigantic group, clothed with forest to the summits. In the river here I found our common

* This work, which it was the intention of the late learned professor to entitle "*Elements of Zoology*," after being *ten* years in the press, was advanced no further than *fifty-six* pages, in octavo, at the death of the author. It does not appear that he left much manuscript matter in continuation, consequently the public will derive no benefit from a work, which is too incomplete for publication. The printed sheets I have read, not only with satisfaction, but instruction; and cannot forbear expressing my regret that an undertaking, which Dr. Barton certainly knew how to perform, and to which his learning was adequate, should have been suffered to perish in embryo. The art of concentrating his talents, was one for which the professor was not greatly distinguished.

reed (*Zizania aquatica*) growing in great abundance in shoals extending along the middle of the river. I saw flocks of Red-wings, and some Black Ducks, but no Rail, or Reed-birds.

* * * *

"From this place my journey led me over a rugged, mountainous country, to Lake Champlain, along which I coasted as far as Burlington, in Vermont. Here I found the little Coot-footed Tringa or Phalarope* that you sent to Mr. Peale; a new and elegantly-marked Hawk; and observed some Black Ducks. The shores are alternate sandy bays, and rocky headlands running into the lake. Every tavern was crowded with officers, soldiers, and travellers. Eight of us were left without a bed; but having an excellent great-coat, I laid myself down in a corner, with a determination of sleeping in defiance of the uproar of the house, and the rage of my companions, who would not disgrace themselves by a prostration of this sort.

* * * *

"From Lake Champlain I traversed a rude mountainous region to Connecticut river, one hundred miles above Dartmouth College. I spent several days with the gun in Groton, and Ryegate townships, and made some discoveries. From this I coasted along the Connecticut to a place called Haverhill, ten miles from the foot of Moose-hillock, one of the highest of the *White Mountains* of New Hampshire. I spent the greater part of a day in ascending to the peak of one of these majestic mountains, whence I had the most sublime and astonishing view that was ever afforded me. One immensity of forest lay below, extended on all sides to the farthest verge of the horizon; while the only prominent objects were the columns of smoke from burning woods, that rose from various parts of the earth beneath to the heavens; for the day was beautiful and serene. Hence I travelled to Dartmouth, and thence in a direct course to Boston. From Boston I passed through Portsmouth to Portland, and got some things new; my return was by a different route. I have procured three new and beautiful Hawks; and have gleaned up a stock of remarks that will be useful to me hereafter.

"I hope, my dear sir, that you have been well since I left you. I have myself been several times afflicted with a violent palpitation of the heart,† and want to try whether a short voyage by sea will not be beneficial.

"In New England the rage of war, the virulence of politics, and the pursuit of commercial speculations, engross every faculty. The voice of Science, and the charms of Nature, unless these last present themselves in the form of *prize sugars, coffee, or rum*, are treated with contempt."

The excursion to the White Mountains, above mentioned, was succeeded by rather an unpleasant occurrence. The good people of Haverhill perceiving a stranger among them of very inquisitive habits, and who evinced great zeal in exploring the country, sagaciously concluded that he was a spy from Canada,

* P. Fulicarius.

† This distressing disease, so well known to the literary student, Wilson was often afflicted with.

employed in taking sketches of the place, to facilitate the invasion of the enemy. Under these impressions it was thought conducive to the public safety that Wilson should be apprehended; and he was accordingly taken into the custody of a magistrate, who, on being made acquainted with his character, and the nature of his visit, politely dismissed him, with many apologies for the mistake.

The publication of the *Ornithology* now advanced as rapidly as a due regard to correctness and elegance would admit. In order to become better acquainted with the feathered tribes, and to observe their migrations with more accuracy, as well as to enjoy the important advantages of a rural retirement, Wilson resided the better part of the years 1811-12 at the Botanic Garden of his friend, Mr. Bartram. There removed from the noise, bustle, and interruption of the metropolis, he was enabled to dispose of his time to the best advantage; for when fatigued with close application within doors, to recruit his mind and body he had only to cross the threshold of his abode, and he at once found himself surrounded with those acquaintance, the observing of whose simple manners not only afforded the most agreeable recreation, but who were perpetually contributing to the great undertaking which he was earnestly laboring to complete.

In the month of March, 1812, Wilson was chosen a member of the Society of Artists of the United States; but in the spring of the succeeding year, a greater honor was conferred upon him, by his being elected a member of the American Philosophical Society of Philadelphia.

TO MR. WM. BARTRAM.

“PHILADELPHIA, April 21st, 1813.

“My Dear Friend.

“I have been extremely busy these several months, my colorists having all left me; so I have been obliged to do extra duty this last winter. Next week I shall publish my seventh volume; and shall send you your copy with the earliest opportunity. I am now engaged with the ducks, all of which, that I am acquainted with, will be comprehended in the eighth volume.

“Since I had the pleasure of seeing you, I have hardly left the house half an hour; and I long most ardently to breathe once more the fresh air of the country, and gaze on the lovely face of Nature. Will it be convenient for the family to accommodate me (as I shall be alone) this summer? Please to let me know.

“I lately received from the celebrated Mr. West, a proof impression of his grand historical picture of the death of Admiral Nelson—a present which I highly value.

“The Philosophical Society of Philadelphia have done me the honor to elect me a member, for which I must certainly, in gratitude, make them a communication on some subject, this summer. I long very much to hear from you; and, with my best wishes for your health and happiness, am very truly

“Your sincere friend.”

As soon as the seventh volume of the *Ornithology* was published, its author, and the writer of this sketch, set out on their last expedition to Great Egg

Harbor.* There they remained for nearly four weeks, constantly occupied in collecting materials for the eighth volume, which Wilson had resolved should in no respects fall short of the preceding; but which should, if possible, enhance his reputation, by the value of its details, and the beauty of its embellishments.

Immediately on his return to Philadelphia, he engaged anew in his arduous avocation; and by the month of August he had succeeded in completing the letter-press of the eighth volume, though the whole of the plates were not finished. But unfortunately his great anxiety to conclude the work, condemned him to an excess of toil, which, inflexible as was his mind, his bodily frame was unable to bear. He was likewise, by this flood of business, prevented from residing in the country, where hours of mental lassitude might have been beguiled by a rural walk, or the rough but invigorating exercise of the gun. At length he was attacked by a disease, which, perhaps, at another period of his life might not have been attended with fatal effects, but which now, in his debilitated state of body, and harassed mind, proved a mighty foe, whose assaults all the combined efforts of friendship, science and skill, could not repel. The dysentery, after a sickness of ten days, closed the mortal career of Alexander Wilson, on the twenty-third of August, 1813.

It may not be going too far to maintain, that in no age or nation has there ever arisen one more eminently qualified for a naturalist than the subject of these memoirs. He was not only an enthusiastic admirer of the works of creation, but he was consistent in research; and permitted no dangers or fatigues to abate his ardor, or relax his exertions. He inured himself to hardships by frequent and laborious exercise; and was never more happy than when employed in some enterprise, which promised from its difficulties the novelties of discovery. Whatever was obtained with ease, to him appeared to be attended, comparatively speaking, with small interest: the acquisitions of labor alone seemed worthy of his ambition. He was no closet philosopher—exchanging the frock of activity for the night-gown and slippers. He was indebted for his ideas, not to books, which err, but to Nature which is infallible; and the inestimable transcript of her works, which he has bequeathed to us, possesses a charm which affects us the more, the better acquainted we become with the delightful original. His inquisitive habits procured him from others a vast heterogeneous mass of information; but he had the happy talent of selecting from this rubbish whatever was valuable. His perseverance was uncommon; and when engaged in pursuit of a particular object, he would never relinquish it, while there was a chance of success. His powers of observation were very acute, and he seldom erred in judgment, when favored with a fair opportunity of investigation.

Credulity has been aptly termed “the vice of naturalists;” but it may be said, to the honor of our author, that it would be difficult to find one less infected with this vice than himself. His mind, strongly imbued with common sense, and familiar with the general laws of nature, could not be imposed upon

* Wilson made six journeys to the coast of New Jersey, in pursuit of water-birds, which abound in the neighborhood of Great Egg Harbor.

by appearances; and marvellous narratives, in that science which he had so much at heart, were the objects of his decided disapprobation. The ridicule and scorn with which he treated the hypothesis of the annual torpidity of swallows are well known; and he regarded with equal contempt those tales of the fascinating faculty attributed to serpents, which are yet but too well adapted to the taste of the multitude to be effectively discredited.

Having been "something of a traveller," it would be reasonable to conclude that Wilson had been familiar with "novel sights;" but we nowhere find that he ever beheld a toad leaping into day from its rocky domicil of five thousand years, or a mermaid "sleeking her soft alluring locks" in the sun. That wonder of the "vasty deep," the *Sea Serpent* of Gloucester, had not attracted the attention of the public in his time; but if it had, there is little doubt that he would have promptly exerted himself to expose one of the grossest fictions that was ever palmed upon the credulity of mankind.

That the industry of Wilson was great, his work will for ever testify. And our admiration is excited, that so much should have been performed in so short a time. When we take into consideration the state of our country, as respects the cultivation of the physical sciences; and that in the walk of Ornithology, particularly, no one, *deserving the title of a Naturalist*, had yet presumed to tread; when we view the labors of foreigners, who had interested themselves in our natural productions, and find how incompetent they were, through a deficiency of correct information, to instruct; and then when we reflect that a single individual, "*without patron, fortune, or recompense*," accomplished, in the space of *seven* years, as much as the combined body of European naturalists took a *century* to achieve, we feel almost inclined to doubt the evidence upon which this conclusion is founded. But it is a fact, which we feel a pride in asserting, that we have as faithful, complete, and interesting, an account of *our* birds, in the volumes of the American Ornithology, as the Europeans can at this moment boast of possessing of *theirs*. Let those who question the correctness of this opinion examine for themselves, and determine according to the dictates of an unbiassed judgment.

We need no other evidence of the unparalleled industry of our author, than the fact, that of *two hundred and seventy-eight species*, which have been figured and described in his Ornithology,* *fifty-six* had not been taken notice of by any former naturalist;† and several of the latter number are so extremely rare,

* The whole number of birds figured is three hundred and twenty.

† In this statement of the number of new species, I followed Wilson's own catalogue, wherein they are indicated. But it is proper to observe, that Vieillot's "*Oiseaux de L'Amérique Septentrionale*" was never seen by our author; otherwise he would have taken notice that some of his supposed nondescripts were figured and described in the above-mentioned costly work, which was published in Paris in the year 1807. Vieillot travelled in the United States, with the view of giving an account of our birds; he published only two folio volumes, with colored plates; his publisher failed; and the copper-plates of the work, including those intended for the third volume, were sold at public sale for *old copper*; and are now (1825) in Philadelphia, and the property of William Maclure, Esq., the President of the Academy of Natural Sciences of Philadelphia.

that the specimens, from which the figures were taken, were the only ones that he was ever enabled to obtain. This expensive collection of birds was the result of many months of unwearied research, amongst forests, swamps and morasses, exposed to all the dangers, privations and fatigues, incident to such an undertaking. What but a remarkable passion for the pursuit, joined with the desire of fame, could have supported a solitary individual, in labors of body and mind, compared to which the bustling avocations of common life are mere holiday activity or recreation !

Independent on that part of his work which was Wilson's particular province, viz. the drawing and describing of his subjects, he was necessitated to occupy much of his time in coloring the plates ; his sole resource for support being in this employment, as he had been compelled to relinquish the superintendence of the *Cyclopædia*. This drudgery of coloring the plates is a circumstance much to be regretted, as the work would have proceeded more rapidly if he could have avoided it. One of his principal difficulties, in effect, and that which caused him no small uneasiness, was the process of coloring. If this could have been done solely by himself ; or, as he was obliged to seek assistance therein, if it could have been performed immediately under his eye, he would have been relieved of much anxiety ; and would have better maintained a due equanimity ; his mind being daily ruffled by the negligence of his assistants, who too often, through a deplorable want of skill and taste, made disgusting caricatures of what were intended to be modest imitations of simple nature.* Hence much of his precious time was spent in the irksome employment of inspecting and correcting the imperfections of others. This waste of his stated periods of labor, he felt himself constrained to compensate, by encroachments on those hours which Nature, tenacious of her rights, claims as her own : hours which she consecrates to rest—which she will not forego without a struggle ; and which all those, who would preserve unimpaired the vigor of their mind and body, must respect. Of this intense and destructive application his friends failed not to admonish him ; but to their kind remonstrances he would reply, that “ life is short, and without exertion nothing can be performed.”

* In the preface to the third volume, Wilson states the anxiety which he had suffered on account of the coloring of the plates ; and of his having made an arrangement, whereby his difficulties on that score had been surmounted. This arrangement proved in the end of greater injury than benefit.

The art of printing in colors is but little known in our country, and seldom practised ; and the few attempts that have been made have only partially succeeded. An experiment of this nature was undertaken upon several plates of this work, but with a success by no means satisfactory. When Wilson commenced his labors, everything relating to them was new to him ; and the difficulty of fixing the proper tints, upon an uniform black ground, was the greater, inasmuch as he had to experiment himself, unaided by the counsel or example of those to whom the process was familiar.

The writer of this narrative has thought it his duty to state *some* of the embarrassments under which Wilson labored, in the department of coloring the plates, in order to obviate criticisms, which too many are disposed to make, on supposed faults ; but if *all* the difficulties were made known, there would be no fear for the result, among readers of candor and understanding.

But the true cause of this extraordinary toil was his poverty. By the terms of agreement with his publisher, he was to furnish at his own cost, all the drawings and literary matter for the work ; and to have the whole under his control and superintendence. The publisher stipulated to find funds for the completion of the volumes. To support the heavy expense of procuring materials, and other unavoidable expenditures, Wilson's only resource, as has been stated, was in coloring the plates.

In the preface to the fifth volume he observes: "The publication of an original work of this kind, in this country, has been attended with difficulties, great, and, it must be confessed, sometimes discouraging to the author, whose only reward *hitherto* has been the favorable opinion of his fellow-citizens, and the pleasure of the pursuit.

"Let but the generous hand of patriotism be stretched forth to assist and cherish the rising arts and literature of our country, and both will most assuredly, and that at no remote period, shoot forth, increase and flourish, with a vigor, a splendor and usefulness, inferior to no other on earth."

We have here an affirmation that the author had labored without reward, except what was conferred by inefficient praise ; and an eloquent appeal to the *generosity* and *patriotism* of his fellow-citizens. Seven illustrious cities disputed the honor of having given *birth* to the Prince of Epic song. Philadelphia first beheld that phenomenon, the "American Ornithology," rising amidst her boasted opulence, to vindicate the claims of a calumniated portion of creation ; and to furnish her literary pride with a subject of exultation for ages to come. Yet duty calls upon us to record a fact, which may cause our native city to feel the glow of shame. Of all her literati, her men of benevolence, taste and riches, SEVENTY only, to the period of the author's decease, had the liberality to countenance him by a subscription, more than half of whom were *tradesmen*, *artists*, and persons of the middle class of society ; whilst the little city of New Orleans, in the short space of *seventeen days*, furnished SIXTY subscribers to the "American Ornithology !"

Wilson was possessed of the nicest sense of honor. In all his dealings he was not only scrupulously just, but highly generous. His veneration for truth was exemplary. His disposition was social and affectionate. His benevolence was extensive. He was remarkably temperate in eating and drinking, his love of study and retirement preserving him from the contaminating influence of the convivial circle. But as no one is perfect, Wilson in a small degree partook of the weakness of humanity. He was of the *genus irritabile*, and was obstinate in opinion. It ever gave him pleasure to acknowledge error, when the conviction resulted from his own judgment alone, but he could not endure to be told of his mistakes. Hence his associates had to be sparing of their criticisms, through a fear of forfeiting his friendship. With almost all his friends he had occasionally, arising from a collision of opinion, some slight misunderstanding, which was soon passed over, leaving no disagreeable impression. But an act of disrespect he could ill brook, and a wilful injury he would seldom forgive.

In his person he was of a middle stature, of a thin habit of body ; his cheek-bones projected, and his eyes, though hollow, displayed considerable vivacity

and intelligence; his complexion was sallow, his mien thoughtful; his features were coarse, and there was a dash of vulgarity in his physiognomy, which struck the observer at the first view, but which failed to impress one on acquaintance. His walk was quick when travelling, so much so that it was difficult for a companion to keep pace with him; but when in the forests, in pursuit of birds, he was deliberate and attentive—he was, as it were, all eyes, and all ears.

Such was Alexander Wilson. When the writer of this humble biography indulges in retrospection, he again finds himself in the society of that individual, whose life was a series of those virtues which dignify human nature; he attends him in his wild-wood rambles, and listens to those pleasing observations, which the magnificence of creation was wont to give birth to; he sits at his feet, and receives the instructions of one, in science, so competent to teach; he beholds him in the social circle, and notes the complacency which he inspired in all around. But the transition from the past to the present quickens that anguish with which his heart must be filled, who casts a melancholy look on those scenes, a few years since endeared by the presence of one, united to him by a conformity of taste, disposition and pursuit, and who reflects that that beloved friend can revisit them no more.

It was the intention of Wilson, on the completion of his *Ornithology*, to publish an edition in four volumes octavo; the figures to be engraved in wood, somewhat after the manner of Bewick's *British Birds*; and colored with all the care that had been bestowed on the original plates. If he had lived to effect this scheme, the public would have been put in possession of a work of considerable elegance, as respects typography and illustrations; wherein the subjects would have been arranged in systematical order; and the whole at the cost of not more than one-fifth part of the quarto edition.

He likewise meditated a work on the quadrupeds of the United States; to be printed in the same splendid style of the *Ornithology*; the figures to be engraved with the highest finish, and by the best artists of our country. How much has science lost in the death of this ingenious and indefatigable naturalist!

His remains were deposited in the cemetery of the Swedish church, in the district of Southwark, Philadelphia. While in the enjoyment of health, he had conversed with a friend on the subject of his death, and expressed a wish to be buried in some rural spot, sacred to peace and solitude, whither the charms of nature might invite the steps of the votary of the Muses, and the lover of science, and where the birds might sing over his grave.

It has been an occasion of regret to those of his friends, to whom was confided the mournful duty of ordering his funeral, that his desire had not been made known to them, otherwise it should have been piously observed.

A plain marble tomb marks the spot where lie the ashes of this celebrated man; it bears the following inscription:

“ This Monument
Covers the Remains of
ALEXANDER WILSON,
Author of the
AMERICAN ORNITHOLOGY.
He was born in Renfrewshire, Scotland,
On the 6 July, 1766;
Emigrated to the United States
In the Year 1794;
And Died in Philadelphia
Of the Dysentery,
On the 23 August, 1813,
Aged 47.”

I shall now offer some brief remarks upon those writings of Wilson, which have fallen under my notice; and in the performance of this task, it will become my duty to speak of a work, which I had hoped would be permitted to lie in oblivion, but which either the indiscreet partiality of friends, or the avarice of a publisher, has lately dragged forth to the view of the public. From the volume which the author published himself, in the year 1791, and which is entitled “Poems, Humorous, Satirical, and Serious,” a selection was made, and published, in 1816, at Paisley and at London, under the title of “Poems, Chiefly in the Scottish Dialect; by Alexander Wilson, Author of American Ornithology.” When I commenced reading this selection, it was my intention to note its beauties and defects; but when I found how greatly the latter predominated, it occurred to me that no good could result from a critical examination of a work which few would read, which contains nothing deserving of applause; and which, if it has hitherto escaped criticism, it is because it has been deemed unworthy of a deliberate investigation.

The early writings of but few authors are worthy of being read, except for the purpose of tracing the progress of the mind. When one surveys the work in question with this view, one is astonished to find no indication of that genius which is so conspicuous in after-life; a barrenness of invention, a poverty of expression, a deficiency of taste and judgment, are its characteristics.

The author of the “Biographical Sketch,” appended to the Selection* above

* It appears by the advertisement affixed to this selection, that it “was made and printed under the direction of a gentleman who has since paid the debt of nature;” and that “it was his intention to give the life of Wilson.” If one were allowed to form a conjecture of the abilities of this editor, by the judgment displayed in his choice, one would have no reason to regret that his task was never accomplished. How he could admit such productions as “The Wasp’s Revenge,” and the “Verses on the Death of a Favorite Spaniel,” one may well inquire.

That Wilson himself entertained a mean opinion of his boyish publication, I am authorized to assert from the circumstance, that, though possessing a copy, he would never allow me to read it, notwithstanding I frequently urged him to grant me this favor.

An itinerant Scotchman once called upon Wilson’s executors, with a request that he might be allowed the privilege of printing an edition of his poems, urging, in justification of the proposition, his peculiar fitness, by his knowledge of the *Scottish dialect*, for

mentioned, says, "We have it from Wilson's acquaintance, that many of the poems he had written were committed to the flames, without a moment's consideration, because the subject had lost its interest with himself." The writer thus gravely accounts for this conduct: "This instability of conduct was, no doubt, the result of untoward circumstances, operating upon a mind ardent in the pursuit of something yet undefined, or uncertain of the path it should follow, to attain that eminence and independence after which it so ardently aspired." Would it not be a more rational supposition, that, as he advanced in knowledge, he was taught to reject what he could not but be convinced was unworthy of the public eye? If we may form a conjecture of what was destroyed, by what was sanctioned by his own act of publication, there is certainly no cause to mourn the loss; and one can hardly forbear wishing that the whole had met a similar fate.

Of all the poetical productions of Wilson, written while in Scotland, his tale of "Watty and Meg" is the only one that has obtained popularity. In Cromek's "Select Scottish Songs" it is thus introduced: "The reader is here presented with an exquisite picture from low life, drawn with all the fidelity and exactness of Teniers, or Ostade, and enlivened with the humor of Hogarth. The story excites as much interest as if it had been written in a dramatic form, and really represented. The interest heightens as it proceeds, and is supported with wonderful spirit to the close of the poem.

"It must have been in no small degree gratifying to the feelings of the author, who published it anonymously, that, during a rapid sale of seven or eight editions, the public, universally, ascribed it to the pen of Burns. The author of 'Will and Jean; or, Scotland's Scaith,' had the candor to acknowledge to the editor that he was indebted to this exquisite poem for the foundation of that popular performance."

This tale is certainly told in a spirited manner; but whether it is entitled to all the encomiums which have been lavished upon it or not, may admit of a question. The incidents are all common-place: a dram-drinking husband seeking refuge, in an ale-house, from a scolding wife, who pursues him thither, and upbraids him, in no gentle terms, for deserting his home and family, and spending his time and substance among drunken blackguards. A pot companion had advised him to try the experiment of threatening to abandon her, in order to bring her into subjection: a scheme which had had a happy effect in taming

extending the *fame* of the author of the American Ornithology! It is needless to add that this poor schemer was dismissed with the reply, that the fame of Wilson did not stand in need of his assistance.

It is much to the honor of the American press, that it has abstained from reprinting the work, which, with unfeigned sorrow, I have been compelled, by a sense of duty, to animadvert so severely upon. But I must confess, that when a brother weaver, Robert Tannahill, was introduced to our notice, I trembled for the fate of Wilson.

As has been stated, Wilson's poem of the "Foresters" was first published in the *Portfolio*. Shortly after the decease of its author, a very *modest* and *honest* gentleman, living in Pennsylvania, undertook its republication; and actually took out a *copyright* for the same. That the poem was reprinted need not excite our wonder; but that its sale should have been monopolized by a patent, is a trick of trade well worthy of remark.

his own wife, who had given evidence of a shrewish disposition. The experiment being made by Watty, Meg is brought to terms. She solemnly promises to keep her temper—never again to scold her husband—never to follow him to the beer-house—never to put drunken to his name—never to look sad when he shall come home late—never to kick his shins, or pull his hair;—and lastly she consents, with tears, that their hard earnings shall be kept solely by himself. The husband, rejoiced at this evidence of her humility and contrition, kisses her, and so the story ends.

In the management of this tale there is little art displayed; there is some natural description, it is true; but the laws of poetical justice are but ill observed, when misconduct so glaring as that of Watty's is passed over without censure; and he is allowed to triumph over the subjection of a poor woman, whose temper had become soured by his idleness and debauchery.

Such stories are not calculated to do good; on the contrary, they may promote vice; and surely the vice of intemperance is no trifling evil in society. To blend instruction with amusement, we are told, should be the aim of all writers of fiction, particularly poets, whose influence over the mind has always been predominant. It is justly remarked, by an elegant writer,* that "there seems to be something in poetry that raises the possessors of that very singular talent far higher in the estimation of the world in general, than those who excel in any other of the refined arts." Then let poets take heed lest they misapply those talents, which, if properly directed, may be made subservient to the best interests of society.

In justice to our author, I would remark, that, though fond of describing scenes of low life, with which his education and habits had rendered him familiar, yet he appeared to have escaped the contaminating influence of vulgar associates, when arrived at manhood. His conduct, in this country, was truly exemplary. This observation, though out of place, I here make, as it seems to belong, incidentally, to the subject upon which I have been commenting.

The last edition of Watty and Meg, published under the inspection of the author, and by him corrected, was that given in the *Port Folio* for October, 1810.

The poetic effusions of Wilson, after he came to America, afford evidence of an improved taste. He acquired a facility of versification by practice; as his mind expanded with knowledge, his judgment received an accession of strength; and he displays a fancy which we look for in vain in his juvenile essays. But we must be understood as comparing him only with himself, at different periods of his life. Whether or not he ever attained to positive excellence in poetry, may be a subject of dispute.

In his "Solitary Tutor," we are presented with a picture of himself, while occupied in teaching a country school. The description of his place of residence, his school-house, the adjoining forest, where many of his leisure hours were passed, and where he first commenced studying the manners of those birds, which he subsequently immortalized in his splendid work, is animated and graphical. The fabric of these verses reminds us of the Minstrel; and

* Melmoth's *Fitzosborne*, letter 53.

that he had this delightful poem in his eye, we are convinced by some of the descriptions and sentiments. The stanza beginning,

“In these green solitudes, one favorite spot,”

is accurately descriptive of a place, in Bartram's woods, whither he used to retire for the purposes of reading and contemplation, and where he planned his Ornithology. Of the faults of this little poem I will merely remark, that the initial quatrain is prosaic; and that the last line betrays an unaccountable deficiency of taste.

The lovers of rural scenery will learn with regret, that this fine piece of forest, consecrated to the Muses of poetry and natural history, by Wilson, is fast disappearing beneath the axe of the husbandman. Already is the brook, which was “o'erhung with alders and mantling vines,” exposed to the glare of day; the favorite haunts of the Wood Thrush are invaded; and, ere long, like his lamented historian, his place will be known there no more.

His poetical description of the Blue-bird, which originally appeared in the first volume of the Ornithology, has been copied into many publications, and still maintains its popularity. It contains some ill-constructed lines, and some rhymes so grossly defective, that we wonder how he could have tolerated them in a production of only half a dozen stanzas. The last quatrain of the fourth stanza contains false syntax; the construction is not regular and dependent, the adverb *so* being out of place. In the third stanza there is a grammatical error. Yet in this little poem, Wilson's happy talent of describing rural scenery, and the habits of birds, is conspicuous. The picture is charming, and more so to an American, who knows how beautifully accurate are its outlines. We see the disappearing of the snows of Winter; the busy labors of the fishermen; the wild geese laboring their airy way to the north; the lone butterfly fluttering over the meadows; the red maple buds bursting into life; and, finally, “the herald of Spring,” the well-known blue-bird, hailing “with his warblings the charms of the season.” The warm sunshine brings out the frogs from their retreats, and their piping is heard throughout the marshes; the woodland flowers unfold their charms to the eye; and the industrious housewives repair to their gardens. The useful bird is beheld flitting through the orchard in search of noxious insects, he drags the devouring grub from the newly-planted maize, and the caterpillars from their webs. The ploughman is pleased to behold him gleaning in his furrows, and the gardener suspends his labors to listen to his simple song. “When all the gay scenes of the summer are o'er,” we observe him lingering about his native home, like a solitary outcast; we hear his melancholy adieu from the leafless branch, and mourn his departure as that of a beloved friend.

Of all Wilson's minor effusions this pleases me the most. Its imagery is derived from objects that are familiar to us, but yet it is not trite; none but an attentive observer of nature could have conceived it, and expressed it so naturally.

It appears to have been his intention to concentrate all his poetical powers in his “Foresters,” resting his hope of fame chiefly upon this production. That the time spent in constructing it, might have been better employed in writing a simple prose narrative of a journey, which was fruitful of interesting

events, must be obvious to many of the readers of this poem, who are acquainted with the author's talents for description, and his appropriate diction, of which we are presented with examples in his letters and his *Ornithology*. On first reading this production such was my impression, and a reperusal has not induced me to change my opinion.

In his exordium he is not very happy :

“ Sons of the city ! ye whom crowds and noise
Bereave of peace, and Nature's rural joys.”

The noise of a crowded city may bereave its inhabitants of peace, but it is difficult to conceive how it can have a tendency to deprive them of the delights of the country.

In the account of his companions and himself he is too circumstantial, details of this kind correspond not well with the dignity of poetry :

“ An oilskin covering glittered round his head.”
“ A knapsack crammed by Friendship's generous care
With cakes and cordials, *drams* and dainty fare ;
Flasks filled with powder, leathern belts with shot,
Clothes, colors, paper, pencils,—and *what not*.”

Also in another place :

“ Full loaded peach trees drooping hung around,
Their mellow fruit thick scattered o'er the ground ;
Six cents procured us a sufficient store,
Our napkins crammed and pockets running o'er.”

Many of his rhymes are bad, particularly in the latter part of the poem, from the carelessness of the composition of which, one is led to conjecture that he was weary of his protracted labor. We have *tale* and *smile* ; *sent* and *want* ; *blest* and *past* ; *bespread* and *clad* ; and many other similar imperfections.

The conclusion of the poem is a specimen of slovenly and inaccurate composition :

“ And when some short and broken slumbers came
Still round us roaring swept th' outrageous stream ;
Whelmed in the *deep* we sunk *engulfed*, forlorn ;
Or down the dreadful rapids helpless borne ;
Groaning we start ! and at the *loudening war*,
Ask our bewildered senses where we *are*.”

In common with those who are ignorant of naval affairs, he commits a blunder in the use of the technical term *main-sheet*, mistaking it for a sail :

—— “ They trim their thundering sail,
The boom and *main-sheet* bending to the gale.”

The *main-sheet* is the rope by means of which the boom is governed, either eased off, or drawn in, as suits the state of the wind.

In a poem consisting of more than two thousand lines, it would be strange if some touches of excellence could not be found, some passages which prove that the author not only possessed poetical ideas, but also was familiar with the art of poetical expression. In his description of the calm, smoky, autumnal weather, which, in America, is usually denominated the *Indian Summer*, we are presented with a beautiful image, which I do not recollect to have seen elsewhere :

“ Slow sailed the thistle-down along the lawn.”

The description of the Dutch farmer, and his habitation, would not disgrace the author of *Rip Van Winkle*.

In the enumeration of the miseries of a country schoolmaster there is much truth ; and the picture is vividly and feelingly drawn from nature. Few had more experience than Wilson of the degraded condition of a teacher, when under the control of the vulgar and ignorant ; a state compared with which the lot of the hewer of wood, and drawer of water, is truly enviable.

The account of *daddy* Squares, the settler, and that of Pat Dougherty, the shopkeeper and publican, contain some humor. The latter is a disgusting exhibition of one of those barbarians, whom the traveller often meets with in the interior of our country ; and whose ignorance, bestiality and vice, have the tendency to disabuse one on the subject of the virtue and happiness usually attributed to the inhabitants remote from our large cities, which, instead of being the only nurseries of corruption, as is believed and affirmed, are the great schools wherein science, literature, piety and manners, are most effectively taught, and most beneficially practised.

The sketch of the Indian hunter is entitled to praise, as being vigorous and picturesque ; and the description of the Bald or Gray Eagles, sailing amid the mist of the Cataract of Niagara, is a picture drawn with fidelity—it is poetical and sublime.

After this superficial review of the poems of Wilson, the question will naturally arise, ought we to consider him as one endued with those requisites, which entitle his productions to rank with the works of the poets, properly so called ? To write smooth and agreeable verses is an art of no very difficult purchase ; we see it daily exemplified by persons of education, whose leisure permits them to beguile a lonely hour with an employment at once delightful and instructive. But when one considers the temporary nature of the great mass of these fugitive essays, that they are read and remembered just so long as is the ephemeral sheet, or magazine, the columns of which they adorn ; one can form no high expectations of the long life of that poetry which seldom rises beyond mediocrity, which sometimes sinks greatly below it ; and which is indebted, in no small degree, to the adventitious aid of a name, resplendent in another walk of literature, for that countenance and support, which its own intrinsic merits, singly, could never claim.

I am aware that these brief observations on the poetry of Wilson, are not calculated to give pleasure to those of his friends, who have been in the habit of regarding him as one possessing no small claim to the inspiration of the Muses. But let such remember the determination of a profound critic, that

"no question can be more innocently discussed than a dead poet's pretensions to renown; and little regard is due to that bigotry which sets candor higher than truth."*

When Wilson commenced the publication of his *History of the Birds of the United States*, he was quite a novice in the study of the *Science* of Ornithology. This arose from two causes: his poverty, which prevented him from owning the works of those authors, who had particularly attended to the classification and nomenclature of birds; and his contempt of the labors of closet naturalists, whose dry descriptions convey anything but pleasure to that mind, which has been disciplined in the school of Nature. But the difficulties under which he labored soon convinced him of the necessity of those helps, which only books can supply; and his repugnance to systems, as repulsive as they are at the first view, gradually gave place to more enlarged notions, on the course to be pursued by him, who would not only attain to knowledge, by the readiest means, but who would impart that knowledge, in the most effective manner, to others.

As far as I can learn, he had access but to two systems of Ornithology—that of Linnæus, as translated by Dr. Turton, and the "General Synopsis" of Dr. Latham.† The arrangement of the latter he adopted in his "General Index" of Land Birds, appended to the sixth volume; and he intended to pursue the same system for the Water Birds, at the conclusion of his work.

The nature of his plan prevented him from proceeding in regular order, according to the system adopted, it being his intention to publish as fast as the materials accumulated; and he being in some measure compelled, by motives of economy, to apportion his figures to the space they would occupy in the plates, he thereby brings to our view, birds not only of different genera, but of different habits, associated in a manner not wholly unnatural, but abhorrent from the views of those systematists, who account every deviation from method an inexcusable fault.

With the art of perspective, it would appear, he was imperfectly acquainted; hence there are errors in his drawings, which the rigid critic cannot overlook. These errors occur most frequently in the feet and the tails of his birds, the latter of which, with the view of being characteristically displayed, are frequently distorted in a manner, which no expediency can justify. One can hardly forbear smiling at the want of correspondence between the figure of the Sharp-shinned Hawk, and the fence upon which it is mounted, the former, instead of appearing of the size of nature, for which the author intended it, absolutely assuming the bulk of an elephant.

But notwithstanding these defects, there is a spirit in some of his drawings which is admirable. Having been taught drawing from natural models, he of course became familiar with natural attitudes: hence his superiority, in this

* Johnson's Preface to Shakspeare.

† The library of Wilson occupied but a small space. On casting my eyes, after his decease, over the ten or a dozen volumes of which it was composed, I was grieved to find that he had been the owner of only *one* work on Ornithology, and that was Bewick's *British Birds*. For the use of the first volume of Turton's Linnæus, he was indebted to the friendship of Mr. Thomas Say; the Philadelphia Library supplied him with Latham.

respect, to all authors extant. Among his figures most worthy of notice, I would particularize the Shore Lark, Brown Creeper, House and Winter Wrens, Mocking-Bird, Cardinal Grosbeak, Cow Buntings, Mottled Owl, Meadow Lark, Barn Swallows, Snipe and Partridge, Rail and Woodcock, and the Ruffed Grouse.

The introduction of appropriate scenery, into a work of this kind, can have no good effect, unless it be made to harmonize, both as to design and execution, with the leading subjects; hence Wilson's landscapes, in the eye of taste, must always be viewed as a blemish, as he was not skilful in this branch of the art of delineation; and, even if he had been dexterous, he was not authorized to increase the expenditures of a work, which, long before its termination, its publisher discovered to be inconveniently burdensome.

The principal objections which I have heard urged against the Ornithology, relate to the coloring; but as the difficulties to which its author was subjected, on this score, have been already detailed, I will merely observe, that he found them too great to be surmounted. Hence a generous critic will not impute to him as a fault, what, in truth, ought to be viewed in the light of a misfortune.

In his specific definitions he is loose and unsystematic. He does not appear to have been convinced of the necessity of precision on this head; his essential and natural characters are not discriminated; and, in some instances, he confounds generic and specific characters, which the laws of methodical science do not authorize.

There is a peculiarity in his orthography, which it is proper that I should take notice of, for the purpose of explaining his motive for an anomaly, at once inelegant and injudicious. I have his own authority for stating, that he adopted this mode of spelling, at the particular instance of the late Joel Barlow, who vainly hoped to give currency, in his heavy Epic, to an innovation, which greater names than his own had been unable to effect.

"Some ingenious men," says Johnson, "have endeavored to deserve well of their country by writing *honor* and *labor* for *honour* and *labour*, *red* for *read* in the preter-tense, *sais* for *says*, *repete* for *repeat*, *explane* for *explain*, or *declame* for *declaim*. Of these it may be said, that as they have done no good, they have done little harm; both because they have innovated little, and because few have followed them."

The recommendation of the learned lexicographer, above cited, ought to be laid to heart by all those whose "vanity seeks praise by petty reformation." "I hope I may be allowed," says he, "to recommend to those, whose thoughts have been perhaps employed too anxiously on verbal singularities, not to disturb upon narrow views, or for minute propriety, the orthography of their fathers. There is in constancy and ability a general and lasting advantage, which will always overbalance the slow improvements of gradual correction."

As it must be obvious that, without books, it would be impossible to avoid error in synonymes and nomenclature, so we find that our author, in these respects, has rendered himself obnoxious to reproach.

That he was not ambitious of the honor of forming new genera, appears from the circumstance, that, although he found the system of Latham needed reformation, yet he ventured to propose but one genus, the *Curvirostra*, the

characters of which are so obvious, that one is astonished that so learned an ornithologist as Latham, should have contented himself with arranging the species appertaining to it with others, the conformation of whose bills is so dissimilar. It may be necessary to state that the Crossbills had been erected into a separate genus, under the denomination of *Crucirostra*, by an author whose works Wilson had no knowledge of; and I have reason to believe that even the generic appellation of *Curvirostra* had been anticipated, by a writer on the ornithology of the northern parts of Europe. Brisson limited his genus *Loxia* to the Crossbills, and this judicious restriction appears to be now sanctioned by all naturalists of authority.

There is a species of learning, which is greatly affected by puny minds, and for which our author entertained the most hearty contempt: this is the names by which certain nations of Indians designated natural objects. Hence we nowhere find his work disfigured by those "uncouth and unmanageable words," which some writers have recorded with a solemnity, which should seem to prove a conviction of their importance; but which, in almost every instance, are a reproach to their vanity and their ignorance. Can anything be more preposterous than for one to give a catalogue of names in a language, the grammatical construction of which has never been ascertained, and with the idiom of which one is totally unacquainted? Among literate nations it is a rule, which has received the sanction of prescription, that when one would write upon a tongue, it is indispensable that one should qualify one's self for the task, by a careful investigation of its principles. But when the language of barbarians becomes the subject of attention, the rule is reversed, and, provided a copious list of names be given, it is not required of the collector, that he should have explored the sources whence they are derived: his learning is estimated by the measure of his labor, and our applause is taxed in proportion to his verbosity.

The style of Wilson appears to be well adapted to the subjects upon which he wrote. It is seldom feeble, it is sometimes vigorous, and it is generally neat. He appears to have "understood himself, and his readers always understand him." That he was capable of graceful writing, he has given us, in the preface to his first volume, which we here insert, a remarkable instance; which is one of the happiest, and most appropriate, compositions that our literature can boast of.

"The whole use of a preface seems to be, either to elucidate the nature and origin of the work, or to invoke the clemency of the reader. Such observations as have been thought necessary for the former, will be found in the introduction; extremely solicitous to obtain the latter, I beg leave to relate the following anecdote.

"In one of my late visits to a friend's in the country, I found their youngest son, a fine boy of eight or nine years of age, who usually resides in town for his education, just returning from a ramble through the neighboring woods and fields, where he had collected a large and very handsome bunch of wild flowers, of a great many different colors; and presenting them to his mother, said, with much animation in his countenance, 'Look, my dear 'ma, what beautiful flowers I have found growing on our place! Why all the woods

are full of them ! red, orange, blue, and most every color. O, I can gather you a whole parcel of them, much handsomer than these, all growing in our own woods ! Shall I, 'ma ? Shall I go and bring you more ?" The good woman received the bunch of flowers with a smile of affectionate complacency ; and after admiring for some time the beautiful simplicity of nature, gave her willing consent ; and the little fellow went off, on the wings of ecstasy, to execute his delightful commission.

"The similitude of this little boy's enthusiasm to my own, struck me ; and the reader will need no explanations of mine to make the application. Should my country receive with the same gracious indulgence the specimens which I here humbly present her ; should she express a desire for me *to go and bring her more*, the highest wishes of my ambition will be gratified ; for, in the language of my little friend, *our whole woods are full of them !* and I can collect hundreds more, *much handsomer than these.*"

In a work abounding with so many excellencies, it would not be difficult to point out passages of merit, any one of which would give the author a just claim to the title of a describer of no ordinary powers.

We select the following description, from the history of the Wood Thrush : "At whatever time the wood thrush may arrive, he soon announces his presence in the woods. With the dawn of the succeeding morning, mounting to the top of some tall tree, that rises from a low thick-shaded part of the woods, he pipes his few, but clear and musical, notes in a kind of ecstasy ; the prelude or symphony to which strongly resembles the double-tongueing of a German flute, and sometimes the tinkling of a small bell. The whole song consists of five or six parts, the last note of each of which is in such a tone, as to leave the conclusion evidently suspended ; the finale is finely managed, and with such charming effect, as to soothe and tranquillize the mind, and to seem sweeter and mellowed at each successive repetition. Rival songsters, of the same species, challenge each other from different parts of the wood, seeming to vie for softer tones, and more exquisite responses. During the burning heat of the day they are comparatively mute ; but in the evening the same melody is renewed, and continued long after sunset. Even in dark, wet and gloomy weather, when scarce a single chirp is heard from any other bird, the clear notes of the wood thrush thrill through the dropping woods, from morning to night ; and it may truly be said that the sadder the day the sweeter is his song."

Perhaps my admiration of this passage may be dependent, in some measure, upon the association of ideas, having been accustomed to frequent the favorite haunts of this exquisite musician, which are "low thick-shaded hollows, through which a small brook or rill meanders, overhung with alder bushes that are mantled with vines." But I can truly declare that I could never read it in an audible voice, the intenseness of my feelings always overpowering me.

He thus delightfully introduces his history of the Barn Swallow : "There are but few persons in the United States unacquainted with this gay, innocent, and active little bird. Indeed the whole tribe are so distinguished from the rest of small birds by their sweeping rapidity of flight, their peculiar aerial evolutions of wing over our fields and rivers, and through our very streets,

from morning to night, that the light of heaven itself, the sky, the trees, or any other common objects of nature, are not better known than the swallows. We welcome their first appearance with delight, as the faithful harbingers and companions of flowery spring, and ruddy summer; and when, after a long, frost-bound and boisterous winter, we hear it announced that the '*Swallows are come!*' what a train of charming ideas are associated with the simple tidings!"

The following remarks on the current doctrine of the hybernation of Swallows are worthy of note. My object in introducing them into this place is twofold: to exemplify our author's talent for copious and equable composition; and to afford myself an opportunity of adding my feeble testimony to his, on a subject which one should suppose would have been long ago definitively ascertained.

"The wonderful activity displayed by these birds, forms a striking contrast to the slow habits of most other animals. It may be fairly questioned whether among the whole feathered tribes, which Heaven has formed to adorn this part of creation, there be any that, in the same space of time, pass over an equal extent of surface with the Swallow. Let a person take his stand on a fine summer evening, by a new-mown field, meadow or river shore, for a short time, and among the numerous individuals of this tribe that flit before him, fix his eye on a particular one, and follow, for a while, all its circuitous labyrinths—its extensive sweeps—its sudden, rapidly reiterated, zigzag excursions, and then attempt, by the powers of mathematics, to calculate the length of the various lines it describes; alas! even his omnipotent fluxions would avail him little here, and he would soon abandon the task in despair. Yet, that some conception may be formed of this extent, let us suppose that this little bird flies, in his usual way, at the rate of one mile in a minute, which, from the many experiments that I have made, I believe to be within the truth; and that he is so engaged for ten hours every day; and further, that this active life is extended to ten years (many of our small birds being known to live much longer, even in a state of domestication), the amount of all these, allowing three hundred and sixty-five days to a year, would give us two millions one hundred and ninety thousand miles: upwards of eighty-seven times the circumference of the globe! Yet this *winged* seraph, if I may so speak, who, in a few days, and at will, can pass from the borders of the arctic regions to the torrid zone, is forced, when winter approaches, to descend to the bottoms of lakes, rivers, and mill-ponds, to bury itself in the mud with eels and snapping turtles; or to creep ingloriously into a cavern, a rat-hole, or a hollow tree, there to doze with snakes, toads, and other reptiles, until the return of spring! Is not this true, ye *wise* men of Europe and America, who have published so many *credible* narratives upon this subject?"

"The geese, the ducks, the catbird, and even the wren, which creeps about our outhouses in summer like a mouse, are all acknowledged to be migratory, and to pass into southern regions at the approach of winter;—the swallow alone, on whom Heaven has conferred superior powers of wing, must sink into torpidity at the bottom of our rivers, or doze all winter in the caverns of the earth. I am myself something of a traveller, and foreign countries afford many novel sights: should I assert, that in some of my peregrinations I had

met with a nation of Indians, all of whom, old and young, at the commencement of cold weather, descend to the bottom of their lakes and rivers, and there remain until the breaking up of frost; nay, should I affirm, that thousands of people in the neighborhood of this city, regularly undergo the same semi-annual submersion—that I myself had fished up a whole family of these from the bottom of the Schuylkill, where they had lain *torpid* all winter, carried them home, and brought them all comfortably to themselves again;—should I even publish this in the learned pages of the Transactions of our Philosophical Society,* who would believe me? Is then the organization of a swallow less delicate than that of a man? Can a bird, whose vital functions are destroyed by a short privation of pure air, and its usual food, sustain, for six months, a situation where the most robust man would perish in a few hours, or minutes?† Away with such absurdities! they are unworthy of a serious refutation. I should be pleased to meet with a man who has been personally more conversant with birds than myself, who has followed them in their wide and devious routes—studied their various manners—mingled with them, and marked their peculiarities more than I have done; yet the *miracle* of a resuscitated swallow, in the depth of winter, from the bottom of a mill-pond, is, I confess, a phenomenon in ornithology that I have never met with.”

The subject of the supposed torpidity of swallows has employed many writers, but unfortunately too few of those, whose practical knowledge enabled them to speak with that certainty, which should always give authority to writings on natural history. Reasoning *à priori* ought to have taught mankind a

* Here there is a palpable allusion to a paper on the hybernation of swallows, which was published in the sixth volume of the Transactions of the American Philosophical Society. This paper was written by one Frederick Antes, and was communicated to the Society by the late Professor Barton. It is probable that Wilson had also read the “letter on the retreat of house-swallows in winter, from the Honorable Samuel Dexter, Esq., to the Honorable James Bowdoin, Esq.,” and that “from the Reverend Mr. Packard to the Honorable Samuel Dexter, Esq.,” both of them published in the Memoirs of the American Academy of Arts and Sciences, of Boston, vols. 1 and 2.

Such communications are not calculated to do honor to any learned institution; and they ought to be rejected with scorn and reprehension.

† Carlisle, in his lecture on muscular motion, observes, that, “animals of the class *Mammalia*, which hibernate and become torpid in the winter, have at all times a power of subsisting under a confined respiration, which would destroy other animals not having this peculiar habit. In all the hybernating *Mammalia* there is a peculiar structure of the heart and its principal veins.” Philosophical Transactions for 1805, p. 17.

“If all birds, except swallows,” says Reeve, “are able to survive the winter, and they alone are so overcome by the cold as to be rendered torpid, the difference must be found in their anatomical structure, and in their habits of life.

“Now, in the first place, it is certain that they have, in common with other birds, the three great functions of respiration, circulation, and assimilation: the similarity of their organs, and every circumstance in their mode of living, prove that they are subject to the same laws: they have also a very high temperature; and are peculiarly organized for rapid and long flight. The size of their lungs, the lightness of their bones, and the buoyancy of their feathers, render it absolutely impossible to sink them in water without a considerable weight; and they die instantly for want of air.” Reeve on Torpidity, p. 43.

more rational opinion, than that which the advocates of hybernation have unthinkingly promulgated. And it is not surprising that as experiments are so easy to be instituted, they should have been so seldom resorted to, in order to determine a problem which many may suppose to be intricate, but which, in effect, is one of the simplest, or most easy to be ascertained, of any in the whole animal kingdom. It is a fact, that all the experiments which have been made, on the subject of the hybernation of birds, have failed to give countenance, in the most remote degree, to this irrational doctrine.

From my personal experience, and from my earliest youth, I have been conversant with the habits of birds, I feel myself justified in asserting, that, in the whole class *Aves*, there has never been an authenticated instance known of a single individual capable of entering into that peculiar state denominated torpidity. Be it observed, that the narratives of credulous travellers, and superficial observers, and newspaper tales, on this subject, are of no authority, and must be utterly rejected. And yet these are the only sources whence naturalists have drawn their opinions on the question of torpidity. It is to be regretted that the authority of Linnæus himself should have given credit and currency to this opinion, and the more so since his example of sanctioning vulgar narratives by his acquiescence, without examination, has been followed by the majority of writers on ornithology, particularly those of Sweden, in which country, if we may place reliance on the transactions of the Academy of Upsal, the submersion of swallows is received as an acknowledged fact.

Linnæus nowhere tells us that he had ever seen a torpid swallow; but what shall we say of the English translator of Kaln's Travels, the learned John Reinhold Forster, who positively asserts that he himself had been an eye witness to the fact of swallows being fished up out of the lake of Lybshau, in Prussia, in the winter, and being restored to animation! a circumstance as impossible, if we are allowed to consider anatomical structure as having any influence on animal existence, as that a human being could be resuscitated after such a submersion.*

* I am unwilling to object falsehood to this accomplished traveller, and therefore must conclude that, in trusting to his memory, after a considerable lapse of time, he must have given that which he had received of another, as the result of his own experience. Mental hallucinations of this kind are not of rare occurrence.

That persons of the strictest veracity are frequently deceived by appearances, there can be no doubt; and therefore it becomes a source of regret when such individuals, in recording their remarks upon the phenomena of nature, omit those considerations, which, if observed, could hardly fail to guard them from error. Had our illustrious countryman, Franklin, when he *thought* he had succeeded in resuscitating a fly, after it had been, for several months, or perhaps years, embalmed in a bottle of Madeira wine, but exercised that common sense, of which he possessed so large a share, and bethought him to *repeat* the experiment, he would have soon discovered, that when the vital juices of an animal become decomposed by an acid, and their place supplied by a spirituous fluid, something more than the influence of solar heat will be requisite to reanimate a fabric, which has, in effect, lost that upon which existence mainly depends.

The writer of this sketch has made several experiments upon flies, with the view of ascertaining the possibility of their being resuscitated after having been drowned in Madeira wine; but in every instance his experiments had a different result from Dr. Franklin's.

Dr. Reeve, in treating of the migration of birds, makes the following judicious observations: "It is singular that this subject should still admit of doubt, when it seems so easy to be decided; yet every month we see queries and answers about the migration of swallows; and every year our curiosity is tempted to be amused with marvellous histories of a party of these birds diving under water in some remote quarter of America. No species of birds, except the swallow, the cuckoo, and the woodcock, have been supposed to remain torpid during the winter months. And what is the evidence in favor of so strange and monstrous a supposition? Nothing but the most vague testimonies, and histories repugnant to reason and experience.

"Other birds are admitted to migrate, and why should swallows be exempt from the general law of their nature? When food fails in one quarter of the world, their instinct prompts them to seek it in another. We know, in fact, that such is their natural habit: we have the most unexceptionable proofs that swallows do migrate; they have been seen at sea on the rigging of ships; and Adanson, the celebrated naturalist, is said to have caught four European swallows fifty leagues from land, between the coast of Gorce and Senegal, in the month of October.

"Spallanzani saw swallows in October on the island of Lipari, and he was told that when a warm southerly breeze blows in winter they are frequently seen skimming along the streets in the city. He concludes that they do not pass into Africa at the approach of winter, but remain in the island, and issue from their retreat on warm days in quest of food."*

The late Professor Barton of Philadelphia, in a letter to the editor of the Philosophical Magazine, thus comments upon the first paragraph of the above remarks of Dr. Reeve: "It appears somewhat surprising to me, that an author

He submerged them in the wine for different periods, viz. six months, eighteen hours, six hours, one hour; and in the last instance they showed signs of life until ten minutes before they were removed for the benefit of the air and sun. Of three flies used in the last experiment, only one was reanimated, but after a few convulsive struggles it expired.

Three flies were afterwards drowned in pure water; and after having been kept in that state for seventeen hours, they were exposed to the sun for several hours, but they gave no signs of life.

Upon a reperusal of Franklin's "Observations upon the Prevailing Doctrines of Life and Death," in which the story of the flies is inserted, it appears obvious to me, that the flies which "fell into the first glass that was filled," were either accidentally thrown into it, or had been in it unperceived, and on this supposition a recovery from suspended animation would have nothing in it which might be thought marvellous.

* An Essay on the Torpidity of Animals, by Henry Reeve, M. D., p. 40.

The author of this narrative, in the middle of December, 1820, was at Nice, on the Mediterranean; and had the gratification of beholding the common European Swallow (*Hirundo rustica*) flying through the streets in considerable numbers. M. Risso, a well-known naturalist, and a resident of the place, informed him that swallows remained there all winter.

On the 20th February, 1818, being at the mouth of the river St. John, in East Florida, I observed several swallows of the species *viridis* of Wilson; and, on the 26th, a flight of them, consisting of several hundreds, coming from the sea. They are the first which reach us in the spring from the south. They commonly arrive in Pennsylvania in the early part of March.

who had so long had the subject of the torpidity of animals under his consideration, should have hazarded the assertion contained in the preceding paragraph. Dr. Reeve has certainly read of other birds besides the swallow, the cuckoo, and the woodcock, which are said to have been found in a torpid state. And ought he not to have mentioned these birds?

"In my 'Fragments of the Natural History of Pennsylvania,' I have mentioned the common humming-bird (*Trochilus colubris*) as one of those American birds which do occasionally become torpid.

"In regard to the swallows, I shall say but little at present. I have, at this time, in the press, a memoir on the migration and torpidity of these birds. *I am confident that I shall be able to convince every candid philosopher, that great numbers of swallows, of different species, do occasionally pass into a state of torpidity*, more or less profound, not merely 'in some remote quarter of America,' but in the vicinity of our capital cities, where there are *some men* of genuine observation and inquiry, and who are as little propense to believe the marvellous in natural history, as any philosophers elsewhere.

"I do not suppose that all the swallows of North America become torpid. It is my present opinion, and it was my opinion when I published the 'Fragments' in 1799, that the swallows, in general, are migratory birds. But subsequent and *very extensive* inquiries have convinced me, that the instances of torpid swallows are much more frequent than I formerly supposed they were; and that there are two species of the genus *Hirundo*, which are peculiarly disposed to pass the brumal season in the cavities of rocks, in the hollows of trees, and in other similar situations, where they have often been found in a *soporose* state. These species are the *Hirundo ripariæ*, or sand swallow; and the *H. pelagica*, which we call chimney swallow. *There is no fact in ornithology better established than THE FACT of the occasional torpidity of these two species of Hirundo!*"*

It is not strange that the "*very extensive*" inquiries of our learned professor should have had a result so different from those of Wilson, an ornithologist infinitely better qualified than himself to investigate a question of this kind, by his zeal, his capacity, and his experience. Who those men of *genuine observation and inquiry* were, who resided in the vicinity of our capital cities, he did not condescend to inform us; if he had done so, we should be enabled to determine, whether or not they were capacitated to give an opinion on a subject, which requires qualifications of a peculiar kind.

At the time in which the professor wrote the above-cited letter, I know of but *two* naturalists in the United States whose opinions ought to have any weight on the question before us, and these were William Bartram and Alexander Wilson, both of whom have recorded their testimony, in the most positive manner, against torpidity.

* Tillock's Philosophical Magazine, vol. 35, p. 241.

"Naturalists," says Dr. Barton in another place, "have not always been philosophers. The *slight and superficial* manner in which they have examined many of the subjects of their science; the credulity which has accompanied them in their researches after truth; and the *precipitancy with which they have decided upon many questions of importance*; are proofs of this assertion." Memoir concerning the fascinating faculty of serpents.

The "Memoir on the Migration and Torpidity of Swallows," wherein Dr. Barton was confident he should be able to convince every candid philosopher of the truth of his hypothesis concerning these birds, never issued from the press, although so publicly announced. And who will venture to say that he did not, by this suppression, manifest his discretion? When Wilson's volume, wherein the swallows are given, appeared, it is probable that the author of the "Fragments" was made sensible that he had been writing upon subjects of which he had little personal knowledge; and therefore he wisely relinquished the task of instructing philosophers, in these matters, to those more capable than himself of such discussions.

Naturalists have not been sufficiently precise when they have had occasion to speak of torpidity. They have employed the term to express that torpor or numbness, which is induced by a sudden change from heat to cold, such as is annually experienced in our climate in the month of March, and which frequently affects swallows to so great a degree as to render them incapable of flight. From the number of instances on record of these birds having been found in this state, the presumption has been that they were capable of passing into a state of torpidity, similar to that of the Marmots, and other hybernating animals.

Smellie, though an advocate for migration, yet admits that swallows may become torpid. "That swallows," says he, "in the winter months, have sometimes, though very rarely, been found in a torpid state, is unquestionably true. Mr. Collinson gives the evidence of three gentlemen who were eye-witnesses to a number of sand-martins being drawn out of a cliff on the Rhine, in the month of March, 1762."* One should suppose that Smellie was too good a logician to infer that, because swallows had been found in the state described, they had remained in that state all winter. A little more knowledge of the subject would have taught the three gentlemen observers, that the poor swallows had been driven to their retreat by cold weather, which had surprised them in their vernal migration; and that this state of numbness, falsely called *torpidity*, if continued for a few days, would for ever have destroyed them.

It is now time to resume the subject of Wilson's Ornithology, as the reader will, probably, consider that we have transgressed the limits which our digression required.

Dr. Drake, in his observations upon the descriptive abilities of the poet Bloomfield, thus expresses himself: "Milton and Thomson have both introduced the flight of the sky-lark, the first with his accustomed spirit and sublimity; but probably no poet has surpassed, either in fancy or expression, the following prose narrative of Dr. Goldsmith. 'Nothing,' observes he, 'can be more pleasing than to see the Lark warbling upon the wing; raising its note as it soars, until it seems lost in the immense heights above us; the note continuing, the bird itself unseen; to see it then descending with a swell as it comes from the clouds, yet sinking by degrees as it approaches its nest; the spot where all its affections are centred; the spot that has prompted all

* Philosophy of Natural History, chap. 20.

this joy.' This description of the descent of the bird, and the pleasures of its little nest, is conceived in a strain of the most exquisite delicacy and feeling."*

I am not disposed to dispute the beauty of the imagery of the above, or the delicacy of its expression; but I should wish the reader to compare it with Wilson's description of the Mocking-bird, unquestionably the most accomplished songster of the feathered race.

"The plumage of the Mocking-bird, though none of the homeliest, has nothing gaudy or brilliant in it; and, had he nothing else to recommend him, would scarcely entitle him to notice; but his figure is well proportioned, and even handsome. The ease, elegance and rapidity of his movements, the animation of his eye,† and the intelligence he displays in listening, and laying up lessons from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities we may add that of a voice full, strong, and musical, and capable of almost every modulation, from the clear mellow tones of the Wood Thrush, to the savage scream of the Bald Eagle. In measure and accent he faithfully follows his originals. In force and sweetness of expression he greatly improves upon them. In his native groves, mounted upon the top of a tall bush or half-grown tree, in the dawn of dewy morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor. The ear can listen to *his* music alone, to which that of all the others seems a mere accompaniment. Neither is this strain altogether imitative. His own native notes, which are easily distinguishable by such as are well acquainted with those of our various song birds, are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or at the most five or six syllables; generally interspersed with imitations, and all of them uttered with great emphasis and rapidity; and continued, with undiminished ardor, for half an hour, or an hour at a time. His expanded wings and tail, glistening with white, and the buoyant gayety of his action, arresting the eye, as his song most irresistibly does the ear. He sweeps round with enthusiastic ecstacy—he mounts and descends as his song swells or dies away; and, as my friend Mr. Bartram has beautifully expressed it, 'He bounds aloft with the celerity of an arrow, as if to recover his very soul, which expired in the last elevated strain.' While thus exerting himself, a bystander, destitute of sight, would suppose that the whole feathered tribes had assembled together, on a trial of skill, each striving to produce his utmost effect, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him; but whose notes he exactly imitates. Even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied calls of their mates; or dive, with precipitation, into the depths of thickets, at the scream of what they suppose to be the Sparrow Hawk.

"The Mocking-bird loses little of the power and energy of his song by con-

* Drake's Literary Hours, No. 39, edition of 1820.

† The reader is referred to our author's figure of this bird, which is one of the most spirited drawings that the records of natural history can produce.

finement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog: Cæsar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings, and bristled feathers, clucking to protect her injured brood. He runs over the quiverings of the Canary, and the clear whistlings of the Virginia Nightingale or Red-bird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent; while he seems to triumph in their defeat by redoubling his exertions.

"This excessive fondness for variety, however, in the opinion of some, injures his song. His elevated imitations of the Brown Thrush are frequently interrupted by the crowing of cocks; and the warblings of the Blue-bird, which he exquisitely manages, are mingled with the screaming of Swallows, or the cackling of hens; amidst the simple melody of the Robin we are suddenly surprised by the shrill reiterations of the Whip-poor-will, while the notes of the Killdeer, Blue Jay, Martin, Baltimore, and twenty others, succeed, with such imposing reality, that we look round for the originals, and discover, with astonishment, that the sole performer in this singular *concert* is the admirable bird now before us. During this exhibition of his powers, he spreads his wings, expands his tail, and throws himself around the cage in all the ecstasy of enthusiasm, seeming not only to sing, but to dance, keeping time to the measure of his own music. Both in his native and domesticated state, during the solemn stillness of night, as soon as the moon rises in silent majesty, he begins his delightful solo; and serenades us with a full display of his vocal powers, making the whole neighborhood ring with his inimitable medley."

I will give but one example more of our author's descriptive powers, and that will be found in his history of the Bald Eagle. As a specimen of nervous writing, it is excellent; in its imagery, it is unsurpassed; and in the accuracy of its detail, it transcends all praise.

"This distinguished bird, as he is the most beautiful of his tribe in this part of the world, and the adopted *emblem* of our country, is entitled to particular notice. He has been long known to naturalists, being common to both continents, and occasionally met with from a very high northern latitude, to the borders of the torrid zone, but chiefly in the vicinity of the sea, and along the shores and cliffs of our lakes and large rivers. Formed by nature for braving the severest cold; feeding equally on the produce of the sea, and of the land; possessing powers of flight capable of outstripping even the tempests themselves; unawed by anything but man; and from the ethereal heights to which he soars, looking abroad, at one glance, on an immeasurable expanse of forests, fields, lakes, and ocean, deep below him; he appears indifferent to the little localities of change of seasons; as in a few minutes he can pass from summer to winter, from the lower to the higher regions of the atmosphere, the abode of eternal cold; and thence descend at will to the torrid or the arctic regions of the earth. He is therefore found at all seasons in the countries which he inhabits; but prefers such places as have been mentioned above, from the great partiality he has for fish.

"In procuring these, he displays, in a very singular manner, the genius and

energy of his character, which is fierce, contemplative, daring and tyrannical: attributes not exerted but on particular occasions; but, when put forth, overpowering all opposition. Elevated upon a high dead limb of some gigantic tree, that commands a wide view of the neighboring shore and ocean, he seems calmly to contemplate the motions of the various feathered tribes that pursue their busy avocations below: the snow-white Gulls slowly winnowing the air; the busy *Tringæ* coursing along the sands; trains of Ducks streaming over the surface; silent and watchful Cranes, intent and wading; clamorous Crows, and all the winged multitudes that subsist by the bounty of this vast liquid magazine of nature. High over all these hovers one, whose action instantly arrests all his attention. By his wide curvature of wing, and sudden suspension in air, he knows him to be the *Fish-hawk* settling over some devoted victim of the deep. His eye kindles at the sight, and balancing himself, with half-opened wings, on the branch, he watches the result. Down, rapid as an arrow from heaven, descends the distant object of his attention, the roar of its wings reaching the ear as it disappears in the deep, making the surges foam around. At this moment the looks of the Eagle are all ardor; and levelling his neck for flight, he sees the Fish-hawk emerge, struggling with his prey, and mounting into the air with screams of exultation. These are the signal for our hero, who, launching into the air, instantly gives chase, soon gains on the Fish-hawk, each exerts his utmost to mount above the other, displaying in these rencontres the most elegant and sublime aerial evolutions. The unnumbered Eagle rapidly advances, and is just on the point of reaching his opponent, when with a sudden scream, probably of despair and honest execration, the latter drops his fish; the Eagle poising himself for a moment, as if to take a more certain aim, descends like a whirlwind, snatches it in his grasp ere it reaches the water, and bears his ill-gotten booty silently away to the woods."

Perhaps there is no similar work extant which can so justly lay claim to the merit of originality as Wilson's Ornithology. In books on natural history, in general, we rarely meet with much that is new; and it is not unusual to behold labored performances, which are undistinguished by any fact, which might prove that their authors are entitled to any other praise than that of diligent compilers. But in the work before us, we are presented with a fund of information of so uncommon a kind, so various, and so interesting, that we are at no loss to perceive that the whole is the result of personal application, directed to the only legitimate source of knowledge—Nature, not as she appears in the cabinet of the collector, but as she reveals herself in all the grace and loveliness of animated existence.

Independent of those pleasing descriptions, which will always insure the work a favorable reception, it has higher claims to our regard, by the philosophical view which it takes of those birds which mankind had, with one consent, proscribed as noxious, but which now we are induced to consider as auxiliaries in agriculture, whose labors could not be dispensed with without detriment. A vagrant chicken, now and then, may well be spared to the hawk or owl who clears our fields of swarms of destructive mice; the woodpecker, whose taste induces him to appropriate to himself the first ripe apple or cherry, has well earned the delicacy, by the myriads of pestilential worms of which he

has rid our orchards, and whose ravages, if not counteracted, would soon deprive us of all fruit; if the crow and the black-bird be not too greedy, we may surely spare them a part of what they have preserved to us, since it is questionable, if their fondness for grubs or cut-worms did not induce them to destroy these enemies of the maize, whether or not a single stalk of this inestimable corn would be allowed to greet the view of the American farmer.

The beauties of this work are so transcendent, that its faults, which are, in truth, mere peccadillos, are hardly perceptible; they may be corrected by one of ordinary application, who needs not invoke to his aid either much learning or much intelligence. A book superior in its typographical execution, and graphical illustrations, it would be no difficult matter to produce, since the ingenuity of man has advanced the fine arts to a state of perfection, sufficient to gratify the most fastidious choice; but who could rival it in those essentials which distinguish it from all other similar undertakings, and which constitute it one of the most valuable offerings to natural science which taste and genius has ever produced?

INTRODUCTION.

IN the commencement of a work of such magnitude, and so novel in this country, some account will necessarily be expected of the motives of the author, and of the nature and intended execution of the work. As to the former of these, it is respectfully submitted, that, amusement blended with instruction, the correction of numerous errors which have been introduced into this part of the natural history of our country, and a wish to draw the attention of my fellow-citizens, occasionally, from the discordant jarrings of politics, to a contemplation of the grandeur, harmony, and wonderful variety of Nature, exhibited in this beautiful portion of the animal creation, are my principal, and almost only, motives, in the present undertaking. I will not deny that there may also be other incitements. Biassed, almost from infancy, by a fondness for birds, and little less than an enthusiast in my researches after them, I feel happy to communicate my observations to others, probably from the mere principle of self-gratification, that source of so many even of our most virtuous actions; but I candidly declare, that *lucrative* views have nothing to do in the business. In all my wild-wood rambles *these* never were sufficient either to allure me to a single excursion, to discourage me from one, or to engage my pen or pencil in the present publication. My hopes on this head are humble enough; I ask only support equal to my merits, and to the laudability of my intentions. I expect no more; I am not altogether certain even of this. But leaving the issue of these matters to futurity, I shall, in the meantime, comfort myself with the good old adage: "Happy are they who expect *nothing*, for they shall not be disappointed."

As to the nature of the work, it is intended to comprehend a description and representation of every species of our native birds, from the shores of the St. Lawrence to the mouths of the Mississippi, and from the Atlantic Ocean to the interior of Louisiana: these will be engraved in a style superior to any thing of the kind hitherto published; and colored from nature with the most scrupulous adherence to the true tints of the original.

The bare account of scientific names, color of bills, claws, feathers, &c., would form but a dry detail; neither, in a publication of the present kind, where every species is faithfully figured and colored, is a long

and minute description of the form, and feathers, absolutely necessary. This would, in the opinion of some, be like introducing a gentleman to company, with "ladies and gentlemen, Mr. ———. He has on a blue coat—white pantaloons—hussar boots," &c., &c., while a single glance of eye, over the person himself, told us all this before the orator had time to open his mouth; so infinitely more rapidly do ideas reach us through the medium of the eye, than by that of the ear. But as time may prey on the best of colors, what is necessary in this respect will by no means be omitted, that the figures and descriptions may mutually corroborate each other. It is also my design to enter more largely than usual into the manners and disposition of each respective species; to become, as it were, their faithful biographer, and to delineate their various peculiarities, in character, song, building, economy, &c., as far as my own observations have extended, or the kindness of others may furnish me with materials.

THE ORNITHOLOGY of the United States exhibits a rich display of the most splendid colors, from the green, silky, gold-bespangled down of the minute Humming-bird, scarce three inches in extent, to the black coppery wings of the gloomy Condor, of sixteen feet, who sometimes visits our northern regions—a numerous and powerful band of songsters, that for sweetness, variety, and melody, are surpassed by no country on earth—an ever-changing scene of migration, from torrid to temperate and from northern to southern regions, in quest of suitable seasons, food, and climate; and such an amazing diversity in habit, economy, form, disposition and faculties, so uniformly hereditary in each species, and so completely adequate to their peculiar wants and convenience, as to overwhelm us with astonishment at the power, wisdom and beneficence of the Creator!

In proportion as we become acquainted with these particulars, our visits to, and residence in the country, become more and more agreeable. Formerly, on such occasions, we found ourselves in solitude, or with respect to the feathered tribes, as if it were in a strange country, where the manners, language and faces of all were either totally overlooked, or utterly unknown to us: now, we find ourselves among interesting and well-known neighbors and acquaintance; and, in the notes of every songster, recognise with satisfaction the voice of an old friend and companion. A study thus tending to multiply our enjoyments at so cheap a rate, and to lead us, by such pleasing gradations, to the contemplation and worship of the *Great First Cause*, the Father and Preserver of all, can neither be idle nor useless, but is worthy of rational beings, and doubtless agreeable to the Deity.

In order to attain a more perfect knowledge of birds, naturalists have divided them into orders, genera, species, and varieties; but in doing this, scarcely two have agreed on the same mode of arrangement, and

this has indeed proved a source of great perplexity to the student. Some have increased the number of orders to an unnecessary extent, multiplied the genera, and, out of mere varieties, produced what they supposed to be entire new species. Others, sensible of the impropriety of this, and wishing to simplify the science, as much as possible, have reduced the orders and genera to a few, and have thus thrown birds, whose food, habits and other characteristic features are widely different, into one and the same tribe, and thereby confounded our perception of that beautiful gradation of affinity and resemblance, which Nature herself seems to have been studious of preserving throughout the whole. One principal cause of the great diversity of classifications, appears to be owing to the neglect, or want of opportunity, in these writers, of observing the manners of the living birds, in their unconfined state, and in their native countries. As well might philosophers attempt to class mankind into their respective *religious* denominations, by a mere examination of their physiognomy, as naturalists to form a correct arrangement of animals, without a knowledge of these necessary particulars.

It is only by personal intimacy that we can truly ascertain the character of either, more particularly that of the feathered race; noting their particular haunts, modes of constructing their nests, manner of flight, seasons of migration, favorite food, and numberless other minutiae, which can only be obtained by frequent excursions in the woods and fields, along lakes, shores and rivers; and require a degree of patience and perseverance which nothing but an enthusiastic fondness for the pursuit can inspire.

Of the numerous systems which have been adopted by different writers, that published by Dr. Latham, in his "Index Ornithologicus," and "General Synopsis of Birds," seems the least subject to the objections above-mentioned; and as, in particularizing the order, genus, &c., to which each bird belongs, this system, with some necessary exceptions, has been *generally* followed in the present work, it is judged proper to introduce it here, for the information, and occasional consultation of the reader.

TABLE OF THE ORDERS AND GENERA OF BIRDS,

ACCORDING TO LATHAM.

<i>Index Ornithologicus.</i>	<i>Synopsis of Birds.</i>
AVIUM ORDINES.	ORDERS OF BIRDS.
DIV. I.	DIV. I.
I. <i>Accipitres</i> ,	Rapacious.
II. <i>Picæ</i> ,	Pics.
III. <i>Passeres</i> ,	Passerine.
IV. <i>Columbæ</i> ,	Columbine.

*Index Ornithologicus.*V. *Gallinæ*,VI. *Struthiones*,

DIV. II.

VII. *Grallæ*.VIII. *Pinnatipedes*,IX. *Palmipedes*,

AVIUM GENERA.

DIV. I.

AVES TERRESTRES.

ORDO I.

ACCIPITRES.

1. *Vultur*,2. *Falco*,3. *Strix*,

ORDO II.

PICÆ.

4. *Lanius*,5. *Psittachus*,6. *Ramphastos*,7. *Momotus*,8. *Scythrops*,9. *Buceros*,10. *Buphaga*,11. *Crotophaga*,11. **Musophaga*,12. *Callæas*,13. *Corvus*,14. *Coracias*,15. *Oriolus*,16. *Gracula*,17. *Paradisæa*,18. *Trogon*,19. *Bucco*,20. *Cuculus*,21. *Yunks*,22. *Picus*,23. *Galbula*,24. *Alcedo*,25. *Sitta*,26. *Todus*,27. *Merops*,28. *Upupa*,*Synopsis of Birds.*

Gallinaceous.

Struthious.

DIV. II.

Waders.

Pinnated feet.

Web-footed.

GENERA OF BIRDS.

DIV. I.

LAND BIRDS.

ORDER I.

RAPACIOUS.

Vulture.

Falcon.

Owl.

ORDER II.

PIES.

Shrike.

Parrot.

Toucan.

Motmot.

Channel-bill.

Hornbill.

Beef-eater.

Ani.

Plantain-eater.

Wattle-bird.

Crow.

Roller.

Oriole.

Grackle.

Paradise-bird.

Curucui.

Barbet.

Cuckoo.

Wryneck.

Woodpecker.

Jacamar.

Kingfisher.

Nuthatch.

Tody.

Bee-eater.

Hoopoe.

Index Ornithologicus.

29. *Certhia*,
30. *Trochilus*,

ORDO III.

PASSERES.

31. *Sturnus*,
32. *Turdus*,
33. *Ampelis*,
34. *Colius*,
35. *Loxia*,
36. *Emberiza*,
37. *Tanagra*,
38. *Fringilla*,
39. *Phytotoma*,
40. *Muscicapa*,
41. *Alauda*,
42. *Motacilla*,
43. *Sylvia*,
44. *Pipra*,
45. *Parus*,
46. *Hirundo*,
47. *Caprimulgus*,

ORDO IV.

COLUMBÆ.

48. *Columba*,

ORDO V.

GALLINÆ.

49. *Pavo*,
50. *Meleagris*,
51. *Penelope*,
52. *Numida*,
53. *Crax*,
53. **Menura*,
54. *Phasianus*,
55. *Tinamus*,
56. *Tetrao*,
57. *Perdix*,
58. *Psophia*,
59. *Otis*,

ORDO VI.

STRUTHIONES.

60. *Didus*,
61. *Struthio*,

Synopsis of Birds.

- Creeper.
Humming-bird.

ORDER III.

PASSERINE.

- Starling.
Thrush.
Chatterer.
Coly.
Grosbeak.
Bunting.
Tanager.
Finch.
Plant-cutter.
Flycatcher.
Lark.
Wagtail.
Warbler.
Manakin.
Titmouse.
Swallow.
Goatsucker.

ORDER IV.

COLUMBINE.

- Pigeon.

ORDER V.

GALLINACEOUS.

- Peacock.
Turkey.
Guan.
Pintado.
Curassow.
Menura.
Pheasant.
Tinamou.
Grouse.
Partridge.
Trumpeter.
Bustard.

ORDER VI.

STRUTHIOUS.

- Dodo.
African Ostrich.

*Index Ornithologicus.*62. *Casuarius.*63. *Rhea,*

DIV. II.

AVES AQUATICÆ.

ORDO VII.

GRALLÆ.

64. *Platalea,*65. *Palamedea,*66. *Mycteria,*67. *Canceroma,*68. *Scopus,*69. *Ardea,*70. *Tantalus,*71. *Numenius,*72. *Scolopax,*73. *Tringa,*74. *Charadrius,*75. *Cursorius,*76. *Hæmatopus,*77. *Glareola,*78. *Rallus,*79. *Parra,*79. **Cercopsis,*80. *Gallinula,*81. *Vaginalis,*

ORDO VIII.

PINNATIPEDES.

82. *Phalaropus,*83. *Fulica,*84. *Podiceps,*

ORDO IX.

PALMIPEDES.

† *Pedibus longioribus,*85. *Recurvirostra,*86. *Corrira,*87. *Phænicopterus,*†† *Pedibus brevioribus,*88. *Diomedea,*89. *Alca,*90. *Uria,*91. *Colymbus,*92. *Rynchops,**Synopsis of Birds.*

Cassowary.

American Ostrich.

DIV. II.

WATER BIRDS.

ORDER VII.

WADERS.

Spoonbill.

Screamer.

Jabiru.

Boatbill.

Umbre.

Heron.

Ibis.

Curlew.

Snipe.

Sandpiper.

Plover.

Courser.

Oyster-catcher.

Pratincole.

Rail.

Jacana.

Cercopsis.

Gallinule.

Sheath-bill.

ORDER VIII.

PINNATED FEET.

Phalarope.

Coot.

Grebe.

ORDER IX.

WEB-FOOTED.

† With long legs.

Avocet.

Courier.

Flamingo.

†† With short legs.

Albatross.

Auk.

Guillemot.

Diver.

Skimmer.

Index Ornithologicus.

- 93. *Sterna*,
- 94. *Larus*,
- 95. *Procellaria*,
- 96. *Mergus*,
- 97. *Anas*,
- 98. *Aptenodytes*,
- 99. *Pelicanus*,
- 100. *Phaeton*,
- 101. *Plotus*,

Synopsis of Birds.

- Tern.
- Gull.
- Petrel.
- Merganser.
- Duck.
- Penguin.
- Pelican.
- Tropic-bird.
- Darter.

It may probably be expected, that, in a publication of this kind, we should commence with the order ACCIPITRES, and proceed, regularly, through the different orders and genera, according to the particular system adopted. This, however desirable, is in the present case altogether impracticable; unless, indeed, we possessed living specimens, or drawings, of every particular species to be described; an acquisition which no private individual, nor public museum in the world, can, as yet, boast of. This work is not intended to be a mere compilation from books, with figures taken from stuffed and dried birds, which would be but a sorry compliment to the science; but a transcript from living Nature, embracing the whole Ornithology of the United States; and as it is highly probable that numerous species, at present entirely unknown, would come into our possession long after that part of the work appropriated for the particular genera to which they belonged had been finished, and thereby interrupt, in spite of every exertion, the regularity of the above arrangement, or oblige us to omit them altogether: considering these circumstances, and that during the number of years which the completion of the present work will necessarily occupy, the best opportunities will be afforded, and every endeavor used, to procure drawings of the whole, a different mode has been adopted, as being more agreeably diversified, equally illustrative of the science, and perfectly practicable; which the other is not. The birds will, therefore, appear without regard to generical arrangement; but the order, genus, &c., of each will be particularly noted; and a complete Index added to the whole, in which every species will be arranged in systematic order, with reference to the volume, page, and plate, where each figure and description may be instantly found.

From the great expense of engravings executed by artists of established reputation, many of those who have published works of this kind, have had recourse to their own ingenuity in etching their plates; but, however honorable this might have been to their industry, it has been injurious to the effect intended to be produced by the figures; since the *point*, alone, is not sufficient to produce a finished engraving; and many

years of application are necessary to enable a person, whatever may be his talents or diligence, to handle the graver with the facility and effect of the pencil; while the time, thus consumed, might be more advantageously employed in finishing drawings, and collecting facts for the descriptive parts, which is the proper province of the Ornithologist. Every person who is acquainted with the extreme accuracy of eminent engravers, must likewise be sensible of the advantage of having the imperfections of the pencil corrected by the excellence of the graver. Every improvement of this kind the author has studiously availed himself of; and has frequently furnished the artist with the living or newly-killed subject itself to assist his ideas.

In coloring the impressions, the same scrupulous attention has been paid to imitate the true tints of the original. The greatest number of the descriptions, particularly those of the nests, eggs, and plumage, have been written in the woods, with the subjects in view, leaving as little as possible to the lapse of recollection: as to what relates to the manners, habits, &c., of the birds, the particulars on these heads are the result of personal observation, from memoranda taken on the spot; if they differ, as they will in many points, from former accounts, this at least can be said in their behalf, that a single fact has not been advanced which the writer was not himself witness to, or received from those on whose judgment and veracity he believed reliance could be placed. When his own stock of observations has been exhausted, and not till then, he has had recourse to what others have said on the same subject, and all the most respectable performances of a similar nature have been consulted, to which access could be obtained; not neglecting the labors of his predecessors in this particular path, Messrs. Catesby and Edwards, whose memories he truly respects. But, as a sacred regard to truth requires that the errors or inadvertencies of these authors, as well as of others, should be noticed, and corrected, let it not be imputed to unworthy motives, but to its true cause, a zeal for the promotion of that science, in which these gentlemen so much delighted, and for which they have done so much.

From the writers of our own country the author has derived but little advantage. The first considerable list of our birds was published in 1787, by Mr. Jefferson, in his celebrated "Notes on Virginia," and contains the names of one hundred and nine species, with the designations of Linnæus and Catesby, and references to Buffon. The next, and by far the most complete that has yet appeared, was published in 1791, by Mr. William Bartram, in his "Travels through North and South Carolina," &c., in which two hundred and fifteen different species are enumerated, and concise descriptions and characteristics of each added, in Latin and English. Dr. Barton, in his "Fragments of the Natural History of Pennsylvania," has favored us with a number of remarks on this sub-

ject; and Dr. Belknap, in his "History of New Hampshire," as well as Dr. Williams, in that of Vermont, have each enumerated a few of our birds. But these, from the nature of the publications in which they have been introduced, can be considered only as catalogues of names, without the detail of specific particulars, or the figured and colored representations of the birds themselves. This task, the hardest of all, has been reserved for one of far inferior abilities, but not of less zeal. With the example of many solitary individuals, in other countries, who have succeeded in such an enterprise, he has cheerfully engaged in the undertaking, trusting for encouragement solely to the fidelity with which it will be conducted.

AMERICAN ORNITHOLOGY.

DIV. I. AVES TERRESTRES. LAND BIRDS.

ORDER I. ACCIPITRES. RAPACIOUS.

GENUS I. VULTUR.* VULTURES.

SPECIES I. *VULTUR AURA*.

TURKEY VULTURE, OR TURKEY-BUZZARD.

[Plate LXXV. Fig. 1.]

Vultur aura, LINN. *Syst.* ed. 10, tom. I., p. 86, 4—*Ind. Orn.* p. 4, No. 8—VIEILLOT, *Ois. de l'Am. Sept.* I., p. 25, pl. 2, bis.—*Carrion Crow*, SLOANE, *Jam.* II., p. 294, tab. 254.—*Carrion Vulture*, LATH. *Gen. Syn.* I., p. 9.—*Le Vautour du Brésil*, BRISS. I., p. 468.—*Turkey-Buzzard*, CATESBY, *Car.* I., p. 6.—BARTRAM'S *Travels*, p. 289.—*Cozcaquauhltli*, CLAVIGERO, *Hist. Mex.* I., p. 47, *English translation*.—*American Vulture*, SHAW, *Gen. Zool.* VII., p. 36.

THIS species is well known throughout the United States, but is most numerous in the southern section of the union. In the northern and middle states it is partially migratory, the greater part retiring to the south on the approach of cold weather. But numbers remain all the winter in Maryland, Delaware, and New Jersey; particularly in the vicinity of the large rivers, and the ocean, which afford a supply of food at all seasons.

In New Jersey,† the Turkey-buzzard hatches in May, the deep recesses of the solitary swamps of that state affording situations well suited

* This genus has been divided into several genera, by modern ornithologists. Temminck adopts the four following: 1. *Vultur*. (Illiger). 2. *Cathartes*. (Illiger). 3. *Gypaetus*. (Storr). 4. *Gypogeranus*. (Illiger). The two following species belong to the second of these, the genus *Cathartes* of Illiger. No true Vulture in the present restricted acceptation of that genus has been found in America.

† The author mentions New Jersey in particular, as in that state he has visited the breeding places of the Turkey-buzzard, and can therefore speak with certainty of the fact. Pennsylvania, it is more than probable, affords situations equally attractive, which are also tenanted by this Vulture, for hatching and rearing its young.

to the purpose. The female is at no pains to form a nest with materials; but having chosen a suitable place, which is either a truncated hollow tree, or an excavated stump or log, she lays on the rotten wood from two to four eggs, of a dull dirty white, splashed all over with chocolate, mingled with blackish touches, the blotches largest and thickest towards the great end; the form somewhat like the egg of a goose, but blunter at the small end; length two inches and three quarters, breadth two inches. The male watches often while the female is sitting; and if not disturbed they will occupy the same breeding place for several years. The young are clothed with a whitish down, similar to that which covers young goslings. If any person approach the nest, and attempt to handle them, they will immediately vomit such offensive matter, as to compel the intruder to a precipitate retreat.

The Turkey-buzzards are gregarious, peaceable, and harmless; never offering any violence to a living animal, or, like the plunderers of the *Falco* tribe, depriving the husbandman of his stock. Hence, though in consequence of their filthy habits they are not beloved, yet they are respected for their usefulness; and in the southern states, where they are most needed, they, as well as the black vultures, are protected by a law, which imposes a fine on those who wilfully deprive them of life. In the middle and northern states, being unprotected by law, these useful birds are exposed to persecution, and, consequently, they avoid the residence of man. They generally roost in flocks, upon the limbs of large trees; and they may be seen in a summer's morning, spreading out their wings to the rising sun, and remaining in that posture for a considerable time. Pennant conjectures that this is "to purify their bodies, which are most offensively fetid." But is it reasonable to suppose that *that* effluvia can be offensive to them, which arises from food perfectly adapted to their nature, and which is constantly the object of their desires? Many birds, and particularly those of the granivorous kind, have a similar habit, which, doubtless, is attended with the same exhilarating effect, that an exposure to the pure air of the morning has on the frame of one just risen from repose.

The Turkey-buzzards, unless when rising from the earth, seldom flap their wings, but sweep along in ogees, and dipping and rising lines, and move with great rapidity. They are often seen in companies, soaring at an immense height, particularly before a thunderstorm. Their wings are not spread horizontally, but form an acute angle with the body, the tips having an upward curve. Their sense of smelling is astonishingly exquisite,* and they never fail to discover carrion, even when at the

* The British public has lately been amused with the tales of a traveller, on some of the animals of our country. Among several particulars, which force themselves upon the attention of the American reader by their novelty, we are presented with

distance from it of several miles. When once they have found a carcass they will not leave the place, if unmolested, till the whole is devoured. At such times they eat so immoderately, that frequently they are incapable of rising, and may be caught without much difficulty; but few that are acquainted with them will have the temerity to undertake the task. A man in the state of Delaware, a few years ago, observing some Turkey-buzzards regaling themselves upon the carcass of a horse, which was in a highly putrid state, conceived the design of making a captive of one, to take home for the amusement of his children. He cautiously approached, and springing upon the unsuspecting group, grasped a fine plump fellow in his arms, and was bearing off his prize in triumph, when lo! the indignant Vulture disgorged such a torrent of filth in the face of our hero, that it produced all the effects of the most powerful emetic, and for ever cured him of his inclination for Turkey-buzzards.

On the continent of America this species inhabits a vast range of territory, being common,* it is said, from Nova Scotia to Terra del Fuego.† How far, on the Pacific, to the northward of the river Columbia, they are found, we are not informed; but it is ascertained that they extend their migrations to the latter, allured thither by the quantity of dead salmon, which at certain seasons line its shores.

They are numerous in the West India islands, where they are said to be "far inferior in size to those of North America."‡ This leads us to the inquiry, whether or not the present species has been confounded by the naturalists of Europe, with the Black Vulture, or Carrion Crow, which is so common in the southern parts of our continent. If not, why has the latter been totally overlooked in the most noted Ornithologies with which the world has been favored, when it is so conspicuous and remarkable, that there is no stranger that visits South Carolina, Geor-

the result of a series of experiments, which were instituted to prove, that the Turkey-buzzard does not possess the *sense of smelling*! This important enunciation would be calculated to disabuse us, with respect to the popular opinion on this subject, did we not recollect, that the sense of *seeing* had, also, by some ingenious naturalists, been denied to the Mole; and that the Bird of Paradise had been affirmed to be deficient of those useful organs of locomotion—*legs*! The lovers of romance may now felicitate themselves upon the ascendancy of an observer, whose *credible* narratives may aspire to the honor of ranking with the tales of the *artless* John Dunn Hunter, or the wonders of that pink of *veracity*, the renowned Sir John Mandeville.

* In the northern states of our union the Turkey-buzzard is only occasionally seen, it is considered a rare bird by the inhabitants.

† Great numbers of a species of Vulture, commonly called Carrion Crow by the sailors, (*Vultur aura*.) were seen upon this island (New Year's Island, near Cape Horn, lat. 55 S. 67 W.) and probably feed on young seal-cubs, which either die in the birth, or which they take an opportunity to seize upon." Cook calls them Turkey-buzzards. Forster's Voy. II., p. 516, quarto, London, 1777.

‡ Pennant, Arctic Zoology.

gia, or the Spanish provinces, but is immediately struck with the novelty of its appearance? We can find no cause for the Turkey-buzzards of the islands* being smaller than ours, and must conclude that the Carrion Crow, which is of less size, has been mistaken for the former. In the history which follows, we shall endeavor to make it evident that the species described by Ulloa, as being so numerous in South America, is no other than the Black Vulture.

Kolben, in his account of the Cape of Good-Hope, mentions a Vulture, which he represents as very voracious and noxious: "I have seen," says he, "many carcasses of cows, oxen and other tame creatures which the *Eagles* had slain. I say carcasses, but they were rather skeletons, the flesh and entrails being all devoured, and nothing remaining but the skin and bones. But the skin and bones being in their natural places, the flesh being, as it were, scooped out, and the wound, by which the Eagles enter the body, being ever in the belly, you would not, till you had come up to the skeleton, have had the least suspicion that any such matter had happened. The Dutch at the Cape frequently call those Eagles, on account of their tearing out the entrails of beasts, *Strunt-Vogels*, i. e. Dung-birds. It frequently happens, that an ox that is freed from the plough, and left to find his way home, lies down to rest himself by the way; and if he does so, 'tis a great chance but the Eagles *fall upon him and devour him*. They attack an ox or cow in a body, consisting of an hundred and upwards."†

Buffon conjectures that this murderous Vulture is the Turkey-buzzard; and concludes his history of the latter with the following invective against the whole fraternity: "In every part of the globe they are voracious, slothful, offensive and hateful, and, like the wolves, are as *noxious during their life*, as useless after their death."

It turns out, however, that this ferocious Vulture is not the Turkey-buzzard, as may be seen in Levaillant's "*Histoire Naturelle des Oiseaux d'Afrique*," vol. I, pl. 10, where the Chasse-fiente, or Strunt-Vogel, is figured and described. The truth of Kolben's story is doubtful; and we would express our regret, that enlightened naturalists should so readily lend an ear to the romances of travellers, who, to excite aston-

* The Vulture which Sir Hans Sloane figured and described, and which he says is common in Jamaica, is undoubtedly the *Vultur aura*; "The head and an inch in the neck are bare and without feathers, of a flesh color, covered with a thin membrane, like that of turkeys, with which the most part of the bill is covered likewise; bill (below the membrane) more than an inch long, whitish at the point; tail broad and nine inches long; legs and feet three inches long; it flies exactly like a kite, and *preys on nothing living*, but when dead it devours their carcasses, whence they are not molested." Sloane, Nat. Hist. Jam. vol. II., p. 294, folio.

† Medley's Kolben, vol. ii. p. 135.

ishment, freely give currency to every ridiculous tale, which the designing or the credulous impose upon them.

The Turkey Vulture is two feet and a half in length, and six feet two inches in breadth; the bill, from the corner of the mouth, is almost two inches and a half long, of a dark horn color, for somewhat more than an inch from the tip, the nostril a remarkably wide slit or opening through it; the tongue is greatly concave, cartilaginous, and finely serrated on its edges; ears sub-cordate, eyes dark, in some specimens reddish hazel; wrinkled skin of the head and neck reddish; the neck not so much caruncled as that of the Black Vulture; from the hind-head to the neck feathers, the space is covered with down, of a sooty black color; the fore part of the neck is bare as far as the breast bone, the skin or the lower part, or pouch, very much wrinkled, this naked skin is not discernible without removing the plumage which arches over it; the whole lower parts, lining of the wings, rump and tail-coverts, are of a sooty brown, the feathers of the belly and vent hairy; the plumage of the neck is large and tumid, and, with that of the back and shoulders, black; the scapulars and secondaries are black on their outer webs, skirted with tawny brown, the latter slightly tipped with white; primaries and their coverts plain brown, the former pointed, third primary the longest; coverts of the secondaries, and lesser coverts, tawny brown, centred with black, some of the feathers, at their extremities, slightly edged with white; the tail is twelve inches long, rounded, of a brownish black, and composed of twelve feathers, which are broad at their extremities; inside of wings and tail light ash; the wings reach to the end of the tail; the whole body and neck, beneath the plumage, are thickly clothed with a white down, which feels like cotton; the shafts of the primaries are yellowish white above, and those of the tail brown, both pure white below; the plumage of the neck, back, shoulders, scapulars and secondaries, is glossed with green and bronze, and has purple reflections; the thighs are feathered to the knees; feet considerably webbed; middle toe three inches and a half in length, and about an inch and a half longer than the outer one, which is the next longest; the sole of the foot is hard and rough; claws dark horn color; the legs are of a pale flesh color, and three inches long. The claws are larger, but the feet slenderer, than those of the Carrion Crow. The bill of the male is pure white, in some specimens the upper mandible is tipped with black. There is little or no other perceptible difference between the sexes.

The bird from which the foregoing description was taken, was shot for this work, at Great Egg-harbor, the thirtieth of January. It was a female, in perfect plumage, excessively fat, and weighed five pounds one ounce, avoirdupois. On dissection, it emitted a slight musky odor.

The Vulture is included in the catalogue of those fowls declared unclean, and an abomination, by the Levitical constitution, and which the

Israelites were interdicted *eating*.* We presume that this prohibition was religiously observed, so far at least as it related to the whole family of the Vultures, from whose flesh there arises such an unsavory odor, that we question if all the sweetening processes ever invented, could render it palatable to a Jew, Pagan, or Christian.

Temminck, and some recent ornithologists, have separated our Vultures from the genus *Vultur*, and have classed them under the genus *Cathartes* of Illiger. It should seem that there is a propriety in this arrangement; but as Wilson published, in his sixth volume, the catalogue of his land birds, adopting the genus *Vultur*, as sanctioned by Latham, we have not thought proper, in this instance, to deviate from his plan.†

SPECIES II. *VULTUR JOTA*.

BLACK VULTURE, OR CARRION CROW.

[Plate LXXV. Fig. 2.]

Vultur jota, GMEL. *Syst.* I., p. 247.—MOLINA, *Hist. Chili*, I., p. 185, *Am. trans.*—Zepilot, CLAVIGERO, *Hist. Mex.* I., p. 47, *Eng. trans.*—Gallinazo, ULLOA, *Voy.* I., p. 52, *Amsterdam ed.*—*Vultur atratus*, BARTRAM, p. 289.—*Vautour du Brésil*, *Pl. Ent.* 187.—*Vultur aura*, B. LATH. *Ind. Orn.* p. v.—*Le Vautour urubu*, VIEILL. *Ois. de l'Am. Sept.* I., p. 23, pl. 2.

THE habits of both this and the preceding Vulture are singular. In the towns and villages of the southern states, particularly Charleston and Georgetown, South Carolina, and in Savannah, Georgia, these birds may be seen either sauntering about the streets; sunning themselves on the roofs of the houses, and the fences; or, if the weather be cold, cowering around the tops of the chimneys, to enjoy the benefit of the heat, which to them is a peculiar gratification. They are protected by a law; and may be said to be completely domesticated, being as common as the poultry, and equally as familiar. The inhabitants, generally, are disgusted with their filthy, voracious habits; but notwithstanding, being viewed as contributive to the removal of dead animal matter, which, if permitted to putrefy during the hot season, would render the atmosphere impure, they have a respect paid them as scavengers, whose labors are subservient to the public good. It sometimes happens that, after having gorged themselves, they vomit down the chimneys, which must be intolerably disgusting, and must provoke the ill will of those whose hospitality is thus required. To obviate this evil, the chimney tops of some houses

* Leviticus, xi., 14. Deuteronomy, xiv. 13.

† From Mr. Ord's supplementary volume.

are furnished with rows of spikes; others are capped, or provided with some apparatus, to hinder the birds from alighting upon them.

The Black Vultures are indolent, and may be observed, in companies, loitering for hours together in one place. They are much darker in their plumage than the Turkey-buzzard. Their mode of flight also varies from that of the latter. The Black Vulture flaps its wings five or six times rapidly, then sails with them extended nearly horizontally; the Turkey-buzzard seldom flaps its wings, and when sailing, they form an upward angle with the body. The latter is not so impatient of cold as the former, and is likewise less lazy. The Black Vulture, when walking at leisure upon the ground, takes great strides—when hurried he runs and jumps awkwardly; the Turkey-buzzard, though seemingly inactive, moves with an even gait. The former, when springing from the ground, will sometimes make a noise exactly resembling the grunt of a pig.

I had been informed, previously to my visit to Georgia, by both William Bartram, and Mr. John Abbot, that the two species did not associate; but I soon discovered that this information was erroneous. I took notice that both of these birds mixed together upon the chimney tops, and the roofs of the houses, and sometimes in the streets; they were equally unsuspicious and tame. It would appear, however, that there are certain districts which are affected by each kind. In the yard of the hotel where I resided, in the town of Savannah, I daily observed numbers of Carrion Crows, unaccompanied by a single Turkey-buzzard. The latter, unless pressed by hunger, will not eat of a carcass until it becomes putrid; the former is not so fastidious, but devours animal food without distinction. Perhaps this may be the reason why the Carrion Crows alone frequent the yards, where servants are in the habit of throwing out animal offals. In the fields, wherever there is a putrid carcass, there will be seen swarms of Turkey-buzzards.

It is said that the Black Vultures sometimes attack young pigs, and eat off their ears and tails; and we have even heard stories of their assaulting feeble calves, and picking out their eyes. But these instances are rare; if otherwise, they would not receive that countenance or protection, which is so universally extended to them, in the states of South Carolina and Georgia, where they abound.

In one of Wilson's journals, I find an interesting detail of the greedy and disgusting habits of this species; and shall give the passage entire, in the same unadorned manner in which it is written.

"February 21, 1809. Went out to Hampstead* this forenoon. A horse had dropped down in the street, in convulsions; and dying, it was dragged out to Hampstead and skinned. The ground, for a hundred

* Near Charleston, South Carolina.

yards around it, was black with Carrion Crows; many sat on the tops of sheds, fences, and houses within sight; sixty or eighty on the opposite side of a small stream. I counted at one time two hundred and thirty-seven, but I believe there were more, besides several in the air over my head, and at a distance. I ventured, cautiously, within thirty yards of the carcass, where three or four dogs, and twenty or thirty Vultures, were busily tearing and devouring. Seeing them take no notice, I ventured nearer, till I was within ten yards, and sat down on the bank. Still they paid little attention to me. The dogs being sometimes accidentally flapped with the wings of the Vultures, would growl and snap at them, which would occasion them to spring up for a moment, but they immediately gathered in again. I remarked the Vultures frequently attack each other, fighting with their claws or heels, striking like a cock, with open wings, and fixing their claws in each other's head. The females, and I believe the males likewise, made a hissing sound, with open mouth, exactly resembling that produced by thrusting a red-hot poker into water; and frequently a snuffling, like a dog clearing his nostrils, as I suppose they were theirs. On observing that they did not heed me, I stole so close that my feet were within one yard of the horse's legs, and again sat down. They all slid aloof a few feet; but seeing me quiet, they soon returned as before. As they were often disturbed by the dogs, I ordered the latter home: my voice gave no alarm to the Vultures. As soon as the dogs departed, the Vultures crowded in such numbers, that I counted at one time thirty-seven on and around the carcass, with several within; so that scarcely an inch of it was visible. Sometimes one would come out with a large piece of the entrails which in a moment was surrounded by several others, who tore it in fragments, and it soon disappeared. They kept up the hissing occasionally. Some of them having their whole legs and heads covered with blood, presented a most savage aspect. Still as the dogs advanced I would order them away, which seemed to gratify the Vultures; and one would pursue another to within a foot or two of the spot where I was sitting. Sometimes I observed them stretching their necks along the ground, as if to press the food downwards."

The Carrion Crow is seldom found, on the Atlantic, to the northward of Newbern, North Carolina, but inhabits, as far as we can ascertain, the whole southern continent. Don Ulloa, in taking notice of the birds of Carthage, gives an account of a Vulture, which we shall quote, in order to establish the opinion, advanced in the preceding history, that it is the present species. We shall afterwards subjoin other testimony in confirmation of this opinion. With respect to the marvellous tale of their attacking the cattle in the pastures, it is too improbable to merit a serious refutation; and it is to be regretted that Vieillot should have

perpetuated this slander, which is so absurd, that we wonder how it could have escaped his animadversion.

“It would be too great an undertaking,” says Ulloa, “to describe all the extraordinary birds that inhabit this country; but I cannot refrain from taking notice of that to which they give the name of *Gallinazo*, from the resemblance it has to the Turkey-hen. This bird is of the size of the Pea-hen, but its head and neck are somewhat larger. From the crop to the base of the bill there are no feathers; and the skin, which is of a *brownish black color*, is wrinkled and rough, and covered with small warts and tubercles. The plumage of the bird is also black. The bill is well proportioned, strong, and a little hooked. These birds are familiar in Carthage, the tops of the houses are covered with them. They are very serviceable, in cleansing the city of all its animal impurities. There are few animals killed whereof they do not obtain the offals; and when this food is wanting, they have recourse to other filth. Their sense of smelling is so acute, that it enables them to trace carrion at the distance of three or four leagues; which they do not abandon until there remains nothing but the skeleton.

“The great number of these birds found in such hot climates, is an excellent provision of nature; as otherwise, the putrefaction caused by the constant and excessive heat, would render the air insupportable to human life. When first they take wing, they fly heavily; but afterwards they rise so high as to be entirely invisible. On the ground they walk sluggishly. Their legs are well proportioned; they have three toes forward, turning inwards, and one in the inside, inclining a little backwards, so that the feet interfering, they cannot walk with any agility, but are obliged to *hop*; each toe is furnished with a long and stout claw.

“When the Gallinazos are deprived of carrion, or food in the city, they are driven by hunger among the cattle of the pastures. If they see a beast with a sore on the back, they alight on it, and attack the part affected; and it avails not that the poor animal *throws itself upon the ground*, and endeavors to intimidate them with its bellowing: *they do not quit their hold!** and by means of their bill they so soon enlarge the wound, that the animal finally becomes their prey.”†

The account, from the same author, of the beneficial effects resulting

* The faculty of prehension, which is possessed, in a remarkable degree, by the whole of the *Falco* tribe, but slightly appertains to Vultures, as is evidenced by their feet and claws; hence all the stories which are related, of their seizing upon their prey, and bearing it off in their talons, are apocryphal. We would extend this remark to the far-famed Condor, whose history has been embellished with feats of strength, not a little allied to the marvellous.

† Voyage Historique de l'Amérique Méridionale, par Don George Juan, et Don Antoine De Ulloa, liv. I., chap. viii., p. 52. A Amsterdam et à Leipzig, 1752, quarto.

from the fondness of the vultures for the eggs of the alligator, merits attention.

"The Gallinazos are the most inveterate enemies of the alligators, or rather they are extremely fond of their eggs; and employ much stratagem to obtain them. During the summer, these birds make it their business to watch the female alligators; for it is in that season that they deposit their eggs in the sand of the shores of the rivers, which are not then overflowed. The Gallinazo conceals itself among the branches and leaves of a tree, so as to be unperceived by the alligator, and permits the eggs quietly to be laid, not even interrupting the precautions that she takes to conceal them. But she is no sooner under the water, than the Gallinazo darts upon the nest; and with its bill, claws, and wings, uncovers the eggs, and gobbles them down, leaving nothing but the shells. This banquet would indeed richly reward its patience, did not a multitude of Gallinazos join the fortunate discoverer, and share in the spoil.

"How admirable the wisdom of that Providence, which hath given to the male alligator an inclination to devour its own offspring; and to the Gallinazo a taste for the eggs of the female! Indeed neither the rivers, nor the neighboring fields, would otherwise be sufficient to contain the multitudes that are hatched; for notwithstanding the ravages of both these insatiable enemies, one can hardly imagine the numbers that remain."*

The Abbé Clavigero, in his History of Mexico, has clearly indicated the present species, as distinguished from the Turkey-buzzard.

"The business of clearing the fields of Mexico, is reserved principally for the *Zopilots*, known in South America by the name of *Gallinazzi*; in other places, by that of *Aure*; and in some places, though very improperly, by that of Ravens. There are two very different species of these birds; the one, the *Zopilot*, properly so called, the other called the *Cozcaquauhtli*: they are both bigger than the Raven. These two species resemble each other in their hooked bill and crooked claws, and by having upon their head, instead of feathers, a wrinkled membrane, with some curling hairs. They fly so high, that although they are pretty large, they are lost to the sight; and especially before a hail storm they will be seen wheeling, in vast numbers under the loftiest clouds, till they entirely disappear. They feed upon carrion, which they discover by the acuteness of their sight and smell, from the greatest height, and descend upon it with a majestic flight, in a great spiral course. They are both almost mute. The two species are distinguished, however, by their size, their color, their numbers, and some other peculiarities. The *Zopilots*, properly so called, have black feathers, with a

* Liv. iv., chap. ix., p. 172.

brown head, bill, and feet; they go often in flocks, and roost together upon trees. This species is very numerous, and is to be found in all the different climates; while on the contrary, the Cozcaquauhtli is far from numerous, and is peculiar to the warmer climates alone.* The latter bird is larger than the Zopilot, has a red head and feet, with a beak of a deep red color, except towards its extremity, which is white. Its feathers are brown, except upon the neck and parts about the breast, which are of a reddish black. The wings are of an ash color upon the inside, and upon the outside are variegated with black and tawny.

"The Cozcaquauhtli is called by the Mexicans, *King of the Zopilots*;† and they say, that when these two species happen to meet together about the same carrion, the Zopilot never begins to eat till the Cozcaquauhtli has tasted it. The Zopilot is a most useful bird to that country, for they not only clear the fields, but attend the crocodiles, and destroy the eggs which the females of those dreadful amphibious animals leave in the sand, to be hatched by the heat of the sun. The destruction of such a bird ought to be prohibited under severe penalties."‡

"The *Jota* (*Vultur jota*)," says the abbé Molina, "resembles much the *Aura*, a species of vulture, of which there is perhaps but one variety. It is distinguished, however, by the beak, which is gray with a black point. Notwithstanding the size of this bird, which is nearly that of the turkey, and its strong and crooked talons, it attacks no other, but feeds principally upon carcasses and reptiles. It is extremely indolent, and will frequently remain for a long time almost motionless, with its wings extended, sunning itself upon the rocks, or the roofs of the houses. When in pain, which is the only time that it is known to make any noise, it utters a sharp cry like that of a rat; and usually disgorges what it has eaten. The flesh of this bird emits a fetid smell that is highly offensive. The manner in which it builds its nest is perfectly correspondent to its natural indolence; it carelessly places between rocks, or even upon the ground, a few dry leaves or feathers, upon which it lays two eggs of a dirty white."§

The Black Vulture is twenty-six inches in length, and four feet eleven inches in extent; the bill is two inches and a half long, of a pale horn color as far as near an inch, the remainder, with the head, and wrinkled skin of the neck, a dirty scurfy black; tongue similar to that of the Turkey-buzzard; nostril an oblong slit; irides dark reddish hazel; ears sublnate; the throat is dashed with yellow ochre in some specimens;

* This is a mistake.

† This is the *Vultur aura*. The bird which now goes by the name of *King of the Zopilots*, in New Spain, is the *Vultur papa* of Linnæus.

‡ Clavigero's Mexico, translated by Cullen, vol. i., p. 47, London.

§ Hist. Chili, Am. trans. i., p. 185.

neck feathers below the caruncled skin much inflated, and very thick; the general color of the plumage is a dull black, except the primaries, which are whitish on the inside, and have four of their broadened edges below of a drab, or dark cream color, extending two inches, which is seen only when the wing is unfolded, the shafts of the feathers white on both sides; the rest of the wing feathers dark on both sides; secondaries, scapulars and tail, with a slight coppery gloss; the wings when folded are about the length of the tail, the fifth feather being the longest; the secondaries are two inches shorter than the tail, which is composed of twelve feathers, and slightly forked, or nearly square; the exterior feathers three-quarters of an inch longer than the rest; the legs are of a dirty limy white, three inches and a half in length, and, with the feet, are thick and strong; the middle toe, including the claw, is four inches long, side toes two inches, and connected to the middle as far as the first joint; inner toe rather the shortest; hind toe pointing inward; claws strong, but not sharp like those of the *Falco* genus, middle claw three-quarters of an inch long; the stomach is not lined with hair as reported. When opened, this bird smells strongly of musk, so much so as to be quite offensive. Sexes nearly alike.

Mr. Abbot informs me that the Carrion Crow builds its nest in the large trees of the low wet swamps, to which places they retire every evening to roost. "They frequent," says he, "that part of the town of Savannah where the hog-butchers reside, and walk about the streets, in great numbers, like domestic fowls. It is diverting to see, when the entrails and offals of the hogs are thrown to them, with what greediness they scramble for the food, seizing upon it, and pulling one against another until the strongest prevails. The Turkey-buzzard is accused of killing young lambs and pigs, by picking out their eyes, but I believe that the Carrion Crow is not guilty of the like practices." When taken alive, this bird bites excessively hard, and its bill, which is very sharp on its edges, is capable of inflicting severe wounds, as I myself experienced.

It is really astonishing that the European naturalists should so long have overlooked the difference which there is between this species and the Turkey-buzzard, in their external conformation. Their heads are differently shaped; their bills and nostrils are considerably unlike; and the arrangement of the neck plumage is entirely dissimilar, as our figures will show. The Turkey-buzzard's neck, along the œsophagus, as far as the breast bone, is bare of feathers, though this nakedness is concealed by the adjacent plumage; the same part in the Carrion Crow is completely clothed. The down of both species has the same cottony appearance.

The drab color on the primaries is not visible when the wing is closed, consequently the marking on the wing of our figure is incorrect.

In the month of December, 1815, a solitary individual of this species made its appearance in Philadelphia. This visitor, as may be presumed, occasioned not a little surprise. It was shot with an air rifle, while perched upon a chimney of a large house in Chestnut street. This bird was put into my hands for examination; and from the appearance of its plumage, I had reason to conjecture that it had escaped from confinement.

From Vieillot's figure and description of the Black Vulture, we must conclude that he had never seen it, either alive, or in a recent state, otherwise he would not have committed the egregious error of representing the naked skin of the bill, head and neck, of a *blood red*, when these parts are of a scurfy, black color, resembling the skin of a dirty negro.*

GENUS II. FALCO. FALCONS.

SPECIES I. *F. PEREGRINUS*.

GREAT-FOOTED HAWK.

[Plate LXXVI. Female.]

Falco Peregrinus, GMEL. *Syst.* I., p. 272, 88.—BRISS. I., p. 341, 6, and Var. A.—*Ind. Orn.* p. 33, No. 72.—*Falco Barbarus*, LINN. *Syst.* ed. 10, tom i., p. 88, No. 6.—GMEL. *Syst.* I., p. 272, 8.—*Ind. Orn.* p. 33, No. 71.—*Falco hornotinus*, BRISS. I., p. 324, A. *Falco niger*, Id. p. 327, E. *Falco maculatus*, Id. p. 329, F.—*Peregrine Falcon*, LATH. *Syn.* I., p. 73, No. 52. Id. suppl. p. 18.—PENN. *Brit. Zool.* No. 48, pl. 20. *Arct. Zool.* No. 97.—SHAW, *Gen. Zool.* vol. vii., p. 128.—MONTAGU, *Orn. Dict. and Suppl.*—LOW, *Fauna, Orcadensis*, p. 150.—*Common Falcon*, LATH. *Syn.* I., p. 65, No. 49, var. A. p. 67, var. E. p. 68, var. F.—*Spotted Hawk or Falcon*, EDWARDS, I., pl. 3. *Black Hawk or Falcon*, Id. pl. 4, both from Hudson's Bay.—*Le Lanier*, Pl. enl. 430, old male. *Le Faucon noir et passager*, Id. 469, young female? *Le Faucon sors*, Id. p. 470, yearling.—*Faucon pèlerin*, TEMM. *Man. d' Orn.* p. 22.

It is with great pleasure that we are now enabled to give a portrait of this celebrated Falcon, drawn of half the size of life, in the best manner of our deceased friend; and engraved by the accurate and ingenious Lawson.

This noble bird had excited our curiosity for a long time. Every visit which we made to the coast, was rendered doubly interesting by the wonderful stories which we heard of its exploits in fowling, and of its daring enterprise. There was not a shooter along the shore but knew it well; and each could relate something of it which bordered on the marvellous. It was described as darting, with the rapidity of an arrow,

* From Mr. Ord's supplementary volume.

upon the ducks when on the wing, and striking them down with the projecting bone of its breast. Even the wild geese were said to be in danger from its attacks, it having been known to sacrifice them to its rapacity.

To behold this hero, the terror of the wild fowl, and the wonder of the sportsmen, was the chief object of our wishes. Day after day did we traverse the salt marshes, and explore the ponds and estuaries, where the web-footed tribes assemble in immense multitudes, in the hope of obtaining the imperial depredator; even all the shooters of the district were summoned to our aid, with the assurance of a great reward if they procured him, but without success. At length, in the month of December, 1812, to the unspeakable joy of Wilson, he received from Egg Harbor a fine specimen of the far-famed Duck Hawk; which was discovered, contrary to his expectations, to be of a species which he had never before beheld.

If we were to repeat all the anecdotes which have been related to us of the achievements of the Duck Hawk, they would swell our pages at the expense, probably, of our reputation. Naturalists should be always on their guard when they find themselves compelled to resort to the observations of others; and record nothing as fact, which has not been submitted to the temperate deliberations of reason. The neglect of this procedure has been a principal cause, why errors and absurdities have so frequently deformed the pages of works of science, which, like a plain mirror, ought to reflect only the true images of nature.

From the best sources of information, we learn that this species is adventurous and powerful; that it darts upon its prey with astonishing velocity; and that it strikes with its formidable feet, permitting the duck to fall previously to securing it. The circumstance of the hawk's never carrying the duck off on striking it, has given rise to the belief of that service being performed by means of the breast, which vulgar opinion has armed with a projecting bone, adapted to the purpose. But this cannot be the fact, as the breast bone of this bird does not differ from that of others of the same tribe, which would not admit of so violent a concussion.

When the water fowl perceive the approach of their enemy, a universal alarm pervades their ranks; even man himself, with his engine of destruction, is not more terrible. But the effect is different. When the latter is beheld, the whole atmosphere is enlivened with the whistling of wings; when the former is recognised, not a duck is to be seen in the air: they all speed to the water, and there remain until the hawk has passed them, diving the moment he comes near them. It is worthy of remark, that he will seldom, if ever, strike over the water, unless it be frozen; well knowing that it will be difficult to secure his quarry. This is something more than instinct.

When the sportsmen perceive the hawk knock down a duck, they frequently disappoint him of it, by being first to secure it. And as one evil turn, according to the maxim of the multitude, deserves another, our hero takes ample revenge on them, at every opportunity, by robbing them of their game, the hard-earned fruits of their labor.

The Duck Hawk, it is said, often follows the steps of the shooter, knowing that the ducks will be aroused on the wing, which will afford it an almost certain chance of success.

We have been informed that those ducks which are struck down, have their backs lacerated from the rump to the neck. If this be the fact, it is a proof that the hawk employs only its talons, which are long and stout, in the operation. One respectable inhabitant of Cape May told us, that he had seen the hawk strike from below.

This species has been long known in Europe; and, in the age of Falconry, was greatly valued for those qualifications which rendered it estimable to the lovers and followers of that princely amusement. But we have strong objections to its specific appellation. The epithet *peregrine* is certainly not applicable to our hawk, which is not migratory, as far as our most diligent inquiries can ascertain; and as additional evidence of the fact, we ourselves have seen it prowling near the coast of New Jersey, in the month of May, and heard its screams, which resemble somewhat those of the Bald Eagle, in the swamps wherein it is said to breed. We have therefore taken the liberty of changing its English name for one which will at once express a characteristic designation, or which will indicate the species without the labor of investigation.*

"This species," says Pennant, "breeds on the rocks of Llandidno, in Caernarvonshire, Wales. That promontory has been long famed for producing a generous kind, as appears by a letter extant in Gloddaeth library, from the lord treasurer Burleigh to an ancestor of Sir Roger Mostyn, in which his lordship thanks him for a present of a fine cast of hawks taken on those rocks, which belong to the family. They are also very common in the north of Scotland; and are sometimes trained for falconry by some few gentlemen who still take delight in this amusement in that part of Great Britain. Their flight is amazing rapid; one that was reclaimed by a gentleman in the Shire of Angus, a county on the east side of Scotland, eloped from its master with two heavy bells attached to each foot, on the 24th of September, 1772, and was killed in the morning of the 26th, near Mostyn, Flintshire."†

The same naturalist, in another place, observes, that "*the American*

* "Specific names, to be perfect, ought to express some peculiarity, common to no other of the genus." Am. Orn. i., p. 65.

† British Zoology.

*species is larger than the European.** They are subject to vary. The Black Falcon, and the Spotted Falcon, of Edwards, are of this kind; each preserves a specific mark, in the black stroke which drops from beneath the eyes, down towards the neck.

"Inhabits different parts of North America, from Hudson's Bay as low as Carolina. In Asia, is found on the highest parts of the Uralian and Siberian chain. Wanders in summer to the very Arctic circle. Is common in Kamtschatka."†

Low says, that this species is found in all the head-lands, and other inaccessible rocks, of Orkney. "It is the falcon, or more noble species of hawk, which was formerly so much coveted, and brought from Orkney. In the Burgh of Birsá I observed the dark-colored kind, so beautifully engraved in the additional volume of the British Zoology. It is likewise found in Marwick-head, Hoy, Walls, Copinsha, and elsewhere in Orkney; likewise in the Fair Isle and Foula; as also in Lambhoga of Fetlor, Fitful, and Sumburgh-Heads of Shetland.

"Never more than one pair of this species inhabit the same rock; and when the young are fit, they are driven out to seek new habitations for themselves. The Falcon's nest, like the Eagle's, is always in the very same spot, and continues so past memory of man."‡

In the breeding season, the Duck Hawk retires to the recesses of the gloomy cedar swamps, on the tall trees of which it constructs its nest, and rears its young, secure from all molestation. In those wilds, which present obstacles almost insuperable to the foot of man, the screams of this bird, occasionally mingled with the hoarse tones of the Heron, and the hootings of the Great-horned Owl, echoing through the dreary solitude, arouse in the imagination all the frightful imagery of desolation. Wilson, and the writer of this article, explored two of these swamps, in the month of May, 1813, in pursuit of the Great Heron, and the subject of this chapter; and although they were successful in obtaining the former, yet the latter eluded their research.

The Great-footed Hawk is twenty inches in length, and three feet eight inches in breadth; the bill is inflated, short and strong, of a light blue color, ending in black, the upper mandible with a tooth-like process, the lower with a corresponding notch, and truncate; nostrils round, with a central point like the pistil of a flower; the eyes are large, irides of a dark brown; cere and orbits pale bluish white; the cartilage over the eyes prominent; frontlet whitish; the head above, cheeks and back,

* If we were to adopt the mode of philosophizing of the Count de Buffon, we should infer that the European species is a *variety of our more generous race, degenerated by the influence of food and climate!*

† Arctic Zoology.

‡ Low's Natural History of the Quadrupeds, Birds, Reptiles, and Fishes, of Orkney and Shetland; published by William Elford Leach, M. D., 4to. 1813.

are black; the wings and scapulars are brownish black, each feather edged with paler, the former long and pointed, reaching almost to the end of the tail; the primaries and secondaries are marked transversely, on the inner vanes, with large oblong spots of ferruginous white; the exterior edge of the tip of the secondaries curiously scalloped, as if a piece had been cut out; the tertials incline to ash color; the lining of the wings is beautifully barred with black and white, and tinged with ferruginous; on a close examination, the scapulars and tertials are found to be barred with faint ash; all the shafts are black; the rump and tail-coverts are light ash, marked with large dusky bars; the tail is rounding, black, tipped with reddish white, and crossed with eight narrow bars of very faint ash; the chin and breast, encircling the black mustaches, are of a pale buff color; breast below, and lower parts, reddish buff, or pale cinnamon, handsomely marked with roundish or heart-shaped spots of black; sides broadly barred with black; the femorals are elegantly ornamented with herring-bones of black, on a buff ground; the vent is pale buff, marked as the femorals, though with less numerous spots; the feet and legs are of a dirty white, stained with yellow ochre, the legs short and stout, feathered a little below the knees, the bare part one inch in length; span of the foot five inches, with a large protuberant sole; middle toe as long as the tarsus; the claws are large and black, middle one three-quarters of an inch long, hind claw seven-eighths of an inch.

The most striking characters of this species are the broad patch of black dropping below the eye, and the uncommonly large feet. It is stout, heavy, and firmly put together.

The bird from which the above description was taken, was shot in a cedar swamp, in Cape May county, New Jersey. It was a female, and contained the remains of small birds, among which were discovered the legs of the Sanderling. The figure in the plate is an excellent resemblance of the original, which was handsomely set up in the Philadelphia Museum.

I am indebted to Mr. Titian Peale, for the view of an immature specimen of the Duck Hawk, which he shot near the Rocky Mountains; it was quite young, having just left the nest. Its colors were principally a dirty white, and a reddish brown; the patch below the eye not very conspicuous; but the characters of the bill and feet proved the species.

According to Temminck, the Peregrine Falcon never inhabits marshy countries; but this, I presume, is a mistake, as our bird is remarkable for its attachment to those places which are affected by the water fowl; and it is well known that the latter abound in all the marshes of the coast.

In the month of November, 1823, I procured a fine living specimen of the Duck Hawk, which I preserved, with the view of noting its

change of plumage. It was a female, and was allowed the free range of a stable and garden. Notwithstanding my care, it lived but nine months. On dissection, I found her eggs very small, although she had every appearance of being an adult. Around the base of the heart, and near the ovaries, I discovered two or three round worms, of about nine inches in length.

During the time that she was in my possession she did not moult; and the change in the color of the plumage was but slight. In winter, the upper parts were dark brown, but in the summer there was an appearance of ash color on the back and wing-coverts. The fact, that the plumage of birds undergoes a change of color, independent of moulting, appears to be now well ascertained; and it is with pleasure that I can add my testimony, on this subject, to the sensible "Remarks on the Changes of the Plumage of Birds," which were published in the twelfth volume of the Transactions of the Linnean Society of London. The paper in question was written by the Rev. William Whitear.

My Duck Hawk never became sufficiently domesticated to permit me to handle her; and if an attempt were made to touch her, she would either hop away in anger, or, if prevented from retreating, she would spring upon me, and strike, furiously, with one of her powerful feet, which were capable of inflicting severe wounds. Unless when very hungry, she would not touch cooked food; she preferred fresh-killed meat, especially tender beef and mutton, generally rejecting the fat. She was fond of small birds, but a live duck was her supreme delight; the sight of one would make her almost frantic; at such times the vigor and activity of her movements, and the animation of her eye, were truly admirable. Her antipathy to cats was great, and when one of these animals approached her, she manifested her displeasure by raising her plumes, opening her mouth, and uttering some sounds, which were doubtless intended as a premonition of danger. If, regardless of all these, the cat got within striking distance, one blow from the Hawk was generally sufficient to compel the intruder to a hasty retreat.*

* From Mr. Ord's supplementary volume.

SPECIES II. *FALCO SPARVERIUS*.

AMERICAN SPARROW HAWK.

[Plate XVI.—Fig. 1.—Female.]

Emerillon de St. Domingue, BUFF. I. 291. *Pl. enl.* 465.—*Arct. Zool.* 212.—*Little Falcon*, LATH. *Syn.* v. I., p. 110, No. 94. *Ib.* 95.

IN no department of ornithology has there been greater confusion, or more mistakes made, then among this class of birds of prey. The great difference of size between the male and female, the progressive variation of plumage to which, for several years, they are subject, and the difficulty of procuring a sufficient number of specimens for examination; all these causes conspire to lead the naturalist into almost unavoidable mistakes. For these reasons, and in order, if possible, to ascertain each species of this genus distinctly, I have determined, where any doubt or ambiguity prevails, to represent both male and female, as fair and perfect specimens of each may come into my possession. According to fashionable etiquette the honor of precedence, in the present instance, is given to the *female* of this species; both because she is the most courageous, the largest and handsomest of the two, best ascertained, and less subject to change of color than the male, who will require some further examination and more observation, before we can venture to introduce him.

This bird is a constant resident in almost every part of the United States, particularly in the states north of Maryland. In the southern states there is a small species found, which is destitute of the black spots on the head; the legs are long and very slender, and the wings light blue. This has been supposed, by some, to be the male of the present species; but this is an error. The eye of the present species is dusky; that of the smaller species a brilliant orange; the former has the tail *rounded* at the end, the latter slightly *forked*. Such essential differences never take place between two individuals of the same species. It ought, however, to be remarked, that in all figures and descriptions I have hitherto met with of the bird now before us, the iris is represented of a bright golden color; but in all the specimens I have shot I uniformly found the eye very dark, almost black, resembling a globe of black glass. No doubt the golden color of the iris would give the figure of the bird a more striking appearance; but in works of natural history to sacrifice truth to mere picturesque effect is detestable; though, I fear, but too often put in practice.

The nest of this species is usually built in a hollow tree; generally

pretty high up, where the top or a large limb has been broken off. I have never seen its eggs; but have been told that the female generally lays four or five, which are of a light brownish yellow color, spotted with a darker tint; the young are fed on grasshoppers, mice, and small birds, the usual food of the parents.

The habits and manners of this bird are well known. It flies rather irregularly, occasionally suspending itself in the air, hovering over a particular spot for a minute or two, and then shooting off in another direction. It perches on the top of a dead tree, or pole in the middle of a field or meadow, and as it alights shuts its long wings so suddenly that they seem instantly to disappear; it sits here in an almost perpendicular position, sometimes for an hour at a time, frequently jerking its tail, and reconnoitering the ground below, in every direction, for mice, lizards, &c. It approaches the farm-house, particularly in the morning, skulking about the barn-yard for mice or young chickens. It frequently plunges into a thicket after small birds, as if by random; but always with a particular, and generally a fatal, aim. One day I observed a bird of this species perched on the highest top of a large poplar, on the skirts of the wood; and was in the act of raising the gun to my eye when he swept down with the rapidity of an arrow into a thicket of briars about thirty yards off; where I shot him dead; and on coming up found the small field sparrow (fig. 2,) quivering in his grasp. Both our aims had been taken in the same instant, and, unfortunately for him, both were fatal. It is particularly fond of watching along hedge rows, and in orchards, where those small birds, represented in the same plate, usually resort. When grasshoppers are plenty they form a considerable part of its food.

Though small snakes, mice, lizards, &c., be favorite morsels with this active bird; yet we are not to suppose it altogether destitute of delicacy in feeding. It will seldom or never eat of anything that it has not itself killed, and even that, if not (as epicures would term it) *in good eating order*, is sometimes rejected. A very respectable friend, through the medium of Mr. Bartram, informs me, that one morning he observed one of these hawks dart down on the ground, and seize a mouse, which he carried to a fence post; where, after examining it for some time, he left it; and, a little while after, pounced upon another mouse, which he instantly carried off to his nest, in the hollow of a tree hard by. The gentleman, anxious to know why the hawk had rejected the first mouse, went up to it, and found it to be almost covered with lice, and greatly emaciated! Here was not only delicacy of taste, but sound and prudent reasoning. "If I carry this to my nest," thought he, "it will fill it with vermin, and hardly be worth eating."

The Blue Jays have a particular antipathy to this bird, and frequently insult it by following and imitating its notes so exactly as to deceive

even those well acquainted with both. In return for all this abuse the hawk contents himself with, now and then, feasting on the plumpest of his persecutors; who are therefore in perpetual dread of him; and yet, through some strange infatuation, or from fear that if they lose sight of him he may attack them unawares, the Sparrow Hawk no sooner appears than the alarm is given, and the whole posse of Jays follow.

The female of this species, which is here faithfully represented from a very beautiful living specimen, furnished by a particular friend, is eleven inches long, and twenty-three from tip to tip of the expanded wings. The cere and legs are yellow; bill blue, tipped with black; space round the eye greenish blue; iris deep dusky; head bluish ash; crown rufous; seven spots of black, on a white ground, surround the head in the manner represented in the figure; whole upper parts reddish bay, transversely streaked with black; primary and secondary quills black, spotted on their inner vanes with brownish white; whole lower parts yellowish white, marked with longitudinal streaks of brown, except the chin, vent and femoral feathers, which are white; claws black.

FALCO SPARVERIUS.

AMERICAN SPARROW HAWK.

[Plate XXXII. Fig. 2—Male.]

Little Hawk, *Arct. Zool.* 211, No. 110.—*Emerillon de Cayenne*, *BUFF. I.*, 291, pl. enl. No. 444.—*LATH. I.*, 110.*

As the male and the female of this species differ considerably in the markings of their plumage, the male is introduced, drawn to one-half its natural size, to conform with the rest of the figures on the plate.

The male Sparrow Hawk measures about ten inches in length, and twenty-one in extent; the whole upper parts of the head are of a fine slate blue, the shafts of the plumage being black, the crown excepted, which is marked with a spot of bright rufous; the slate tapers to a point on each side of the neck; seven black spots surround the head, as in the female, on a reddish white ground, which also borders each sloping side of the blue; front, lores, line over and under the eye, chin and throat, white; femoral and vent feathers yellowish white; the rest of the lower

* We add the following synonymes:—*Falco sparverius*. *LINN. Syst.* ed. 10, p. 90.—*GMEL. Syst. I.*, p. 284.—*Ind. Orn.* p. 42.—*F. Dominicensis*, *GMEL. Syst. I.*, p. 285.—*Little Hawk*, *CATESBY, I.*, p. 5.—*L'Emerillon de la Caroline*, *BRISS. Orn. I.*, p. 386.—*L'Emerillon de St. Domingue*, *Id.* p. 389.—*Tinnunculus sparverius*, *VIEIL. Ois. de l'Am. Sept.* p. 12–13.

parts of the same tint, each feather being streaked down the centre with a long black drop, those on the breast slender, on the sides larger; upper part of the back and scapulars deep reddish bay, marked with ten or twelve transverse waves of black; whole wing-coverts, and ends of the secondaries, bright slate, spotted with black; primaries and upper half of the secondaries black, tipped with white, and spotted on their inner vanes with the same; lower part of the back, the rump and tail-coverts, plain bright bay; tail rounded, the two exterior feathers white, their inner vanes beautifully spotted with black; the next bright bay, with a broad band of black near its end, and tipped for half an inch with yellowish white, part of its lower exterior edge white, spotted with black, and its opposite interior edge touched with white; the whole of the others are very deep red bay, with a single broad band of black near the end, and tipped with yellowish white; cere and legs yellow, orbits the same, bill light blue; iris of the eye dark, almost black, claws blue black.

The character of this corresponds with that of the female, given at large in the preceding article. I have reason, however, to believe, that these birds vary considerably in the color and markings of their plumage during the first and second years; having met with specimens every way corresponding with the above, except in the breast, which was a plain rufous white, without spots; the markings on the tail also differing a little in different specimens. These I uniformly found on dissection to be males; from the stomach of one of which I took a considerable part of the carcass of a robin (*Turdus migratorius*,) including the unbroken feet and claws; though the robin actually measures within half an inch as long as the Sparrow Hawk.

Note.—This species is very common among the cotton plantations of Georgia and East Florida. From the island of Cuba we received a living specimen, which differed in no respect from the same species in the United States.

SPECIES III. *FALCO COLUMBARIUS*.

PIGEON HAWK.

[Plate XV. Fig. 3.—Male.]

LINN. *Syst.* ed. 10, p. 90, No. 19.—LATH. *Syn.* v. I., p. 101, No. 86.—*L'Epervier de la Caroline*, BRISS. *Orn.* I., p. 378.—CATESB. I., p. 3. t. 3.—BARTRAM, p. 290.—GMEL. *Syst.* v. I., p. 281.

THIS small Hawk possesses great spirit and rapidity of flight. He is generally migratory in the middle and northern states, arriving in Pennsylvania early in spring, and extending his migrations as far north as Hudson's Bay. After building and rearing his young, he retires to the south early in November. Small birds and mice are his principal food. When the Reed-birds, Grakles, and Red-winged Blackbirds, congregate in large flights, he is often observed hovering in their rear, or on their flanks, picking up the weak, the wounded or stragglers; and frequently making a sudden and fatal sweep into the very midst of their multitudes. The flocks of robins and pigeons are honored with the same attentions from this marauder; whose daily excursions are entirely regulated by the movements of the great body, on whose unfortunate members he fattens. The individual from which the drawing in the plate was taken, was shot in the meadows below Philadelphia, in the month of August. He was carrying off a blackbird (*Oriolus phæniceus*) from the flock, and though mortally wounded and dying, held his prey fast till his last expiring breath; having struck his claws into its very heart. This was found to be a male. Sometimes when shot at, and not hurt, he will fly in circles over the sportsman's head, shrieking out with great violence, as if highly irritated. He frequently flies low, skimming a little above the field. I have never seen his nest.

The Pigeon Hawk is eleven inches long, and twenty-three broad; the whole upper parts are of a deep dark brown, except the tail, which is crossed with bars of white; the inner vanes of the quill feathers are marked with round spots of reddish brown; the bill is short, strongly toothed, of a light blue color, and tipped with black; the skin surrounding the eye greenish; cere the same; temples, and line over the eye, light brown; the lower parts brownish white, streaked laterally with dark brown; legs yellow, claws black. The female is an inch and a half longer, of a still deeper color, though marked nearly in the same manner, with the exception of some white on the hindhead. The femorals, or thigh feathers, in both, are of a remarkable length, reaching

nearly to the feet, and are also streaked longitudinally with dark brown. The irides of the eyes of this bird have been hitherto described as being of a brilliant yellow; but every specimen I have yet met with had the iris of a deep hazel. I must therefore follow nature, in opposition to very numerous and respectable authorities.

I cannot, in imitation of European naturalists, embellish the history of this species with anecdotes of its exploits in falconry. This science, if it may be so called, is among the few that have never yet travelled across the Atlantic; neither does it appear that the idea of training our hawks or eagles to the chase ever suggested itself to any of the Indian nations of North America. The Tartars, however, from whom, according to certain writers, may of these nations originated, have long excelled in the practice of this sport; which is indeed better suited to an open country than to one covered with forest. Though once so honorable and so universal, it is now much disused in Europe, and in Britain is nearly extinct. Yet I cannot but consider it as a much more noble and princely amusement than horse-racing and cock-fighting, cultivated in certain states with so much care; or even than pugilism, which is still so highly patronized in some of those enlightened countries.

SPECIES IV. *FALCO LEUCOCEPHALUS*.

WHITE-HEADED, OR BALD EAGLE.*

[Plate XXXVI. Female.]

LINN. *Syst.* 124.—LATH. I., 29.—*Le pygargue à tête blanche*, BUFF. I., 99, pl. enl. 411.—*Arct. Zool.* 196, No. 89.—*Bald Eagle*, CATESB. I., 1.†

THIS distinguished bird, as he is the most beautiful of his tribe in this part of the world, and the adopted emblem of our country, is entitled to particular notice. He is represented, in the plate, of one-third his natural size, and was drawn from one of the largest and most perfect specimens I have yet met with. In the back ground is seen a distant view of the celebrated cataract of Niagara, a noted place of resort for these birds, as well on account of the fish procured there, as for the

* The epithet *bald*, applied to this species, whose head is thickly covered with feathers, is equally improper and absurd with the titles Goatsucker, Kingfisher, &c., bestowed on others; and seems to have been occasioned by the white appearance of the head, when contrasted with the dark color of the rest of the plumage. The appellation, however, being now almost universal, is retained in the following pages.

† We add the following synonymes.—*Falco Leucocephalus*, GMEL. *Syst.* I., p. 255.—LATH. *Ind. Orn.* p. 11.—*Aigle à tête blanche*, TEMM. *Man. d' Orn.* p. 52.—*L'Aigle pygargue*, VIEILLLOT, *Ois. de l'Am. Sept.* I., p. 27, pl. 3.

numerous carcasses of squirrels, deer, bear, and various other animals, that, in their attempts to cross the river, above the falls, have been dragged into the current, and precipitated down that tremendous gulf; where among the rocks that bound the rapids below, they furnish a rich repast for the Vulture, the Raven, and the Bald Eagle, the subject of the present account.

This bird has been long known to naturalists, being common to both continents; and occasionally met with from a very high northern latitude, to the borders of the torrid zone, but chiefly in the vicinity of the sea, and along the shores and cliffs of our lakes and large rivers. Formed by nature for braving the severest cold; feeding equally on the produce of the sea, and of the land; possessing powers of flight, capable of outstripping even the tempests themselves; unawed by anything but man, and, from the ethereal heights to which he soars, looking abroad at one glance, on an immeasurable expanse of forests, fields, lakes and ocean, deep below him; he appears indifferent to the little localities of change of seasons; as in a few minutes he can pass from summer to winter, from the lower to the higher regions of the atmosphere, the abode of eternal cold; and thence descend at will to the torrid or the arctic regions of the earth. He is therefore found at all seasons in the countries he inhabits; but prefers such places as have been mentioned above, from the great partiality he has for fish.

In procuring these he displays, in a very singular manner, the genius and energy of his character, which is fierce, contemplative, daring and tyrannical; attributes not exerted but on particular occasions; but when put forth, overpowering all opposition. Elevated on a high dead limb of some gigantic tree, that commands a wide view of the neighboring shore and ocean, he seems calmly to contemplate the motions of the various feathered tribes that pursue their busy avocations below: the snow-white Gulls, slowly winnowing the air; the busy *Tringæ*, coursing along the sands; trains of Ducks, streaming over the surface; silent and watchful Cranes, intent and wading; clamorous Crows, and all the winged multitudes that subsist by the bounty of this vast liquid magazine of nature. High over all these hovers one, whose action instantly arrests all his attention. By his wide curvature of wing, and sudden suspension in air, he knows him to be the *Fish-Hawk* settling over some devoted victim of the deep. His eye kindles at the sight, and balancing himself, with half-opened wings, on the branch, he watches the result. Down, rapid as an arrow from heaven, descends the distant object of his attention, the roar of its wings reaching the ear as it disappears in the deep, making the surges foam around! At this moment the eager looks of the Eagle are all ardor; and levelling his neck for flight, he sees the *Fish-Hawk* once more emerge, struggling with his prey, and mounting in the air with screams of exultation. These are

the signal for our hero, who, launching into the air, instantly gives chase, soon gains on the Fish-Hawk, each exerts his utmost to mount above the other, displaying in these rencounters the most elegant and sublime aerial evolutions. The unencumbered Eagle rapidly advances, and is just on the point of reaching his opponent, when, with a sudden scream, probably of despair and honest execration, the latter drops his fish; the Eagle poising himself for a moment, as if to take a more certain aim, descends like a whirlwind, snatches it in his grasp ere it reaches the water, and bears his ill-gotten booty silently away to the woods.

These predatory attacks, and defensive manœuvres, of the Eagle and the Fish-Hawk, are matters of daily observation along the whole of our seacoast, from Florida to New England; and frequently excite great interest in the spectators. Sympathy, however, on this, as on most other occasions, generally sides with the honest and laborious sufferer, in opposition to the attacks of power, injustice and rapacity; qualities for which our hero is so generally notorious, and which, in his superior, *man*, are certainly detestable. As for the feelings of the poor fish, they seem altogether out of the question.

When driven, as he sometimes is, by the combined courage and perseverance of the Fish-Hawks from their neighborhood, and forced to hunt for himself, he retires more inland, in search of young pigs, of which he destroys great numbers. In the lower parts of Virginia and North Carolina, where the inhabitants raise vast herds of those animals, complaints of this kind are very general against him. He also destroys young lambs in the early part of spring; and will sometimes attack old sickly sheep, aiming furiously at their eyes.

In corroboration of the remarks I have myself made on the manners of the Bald Eagle, many accounts have reached me from various persons of respectability, living on or near our seacoast; the substance of all these I shall endeavor to incorporate with the present account.

Mr. John L. Gardiner, who resides on an island of three thousand acres, about three miles from the eastern point of Long Island, from which it is separated by Gardiner's Bay, and who has consequently many opportunities of observing the habits of these birds, has favored me with a number of interesting particulars on this subject; for which I beg leave thus publicly to return my grateful acknowledgment.

"The Bald Eagles," says this gentleman, "remain on this island during the whole winter. They can be most easily discovered on evenings by their loud snoring while asleep, on high oak trees; and when awake, their hearing seems to be nearly as good as their sight. I think I mentioned to you that I had myself seen one flying with a lamb ten days old, and which it dropped on the ground, from about ten or twelve feet high. The struggling of the lamb, more than its weight, prevented

its carrying it away. My running, hallooing, and being very near, might prevent its completing its design. It had broke the back in the act of seizing it; and I was under the necessity of killing it outright to prevent its misery. The lamb's dam seemed astonished to see its innocent offspring borne off into the air by a bird.

"I was lately told," continues Mr. Gardiner, "by a man of truth, that he saw an Eagle rob a Hawk of its fish, and the Hawk seemed so enraged as to fly down at the Eagle, while the Eagle very deliberately, in the air, threw himself partly over on his back, and while he grasped with one foot the fish, extended the other to threaten or seize the Hawk. I have known several Hawks unite to attack the Eagle; but never knew a single one to do it. The Eagle seems to regard the Hawks as the Hawks do the King-birds, only as teasing, troublesome fellows."

From the same intelligent and obliging friend, I lately received a well preserved skin of the Bald Eagle, which, from its appearance, and the note that accompanied it, seems to have belonged to a very formidable individual. "It was shot," says Mr. Gardiner, "last winter, on this island, and weighed thirteen pounds, measured three feet in length, and seven from tip to tip of the expanded wings; was extremely fierce-looking; though wounded, would turn his back to no one; fastened his claws into the head of a dog, and was with difficulty disengaged. I have rode on horseback within five or six rods of one, who, by his bold demeanor, raising his feathers, &c., seemed willing to dispute the ground with its owner. The crop of the present was full of mutton from my part-blood merinos; and his intestines contained feathers, which he probably devoured with a duck, or winter gull, as I observed an entire foot and leg of some water fowl. I had two killed previous to this which weighed ten pounds avoirdupois each."

The intrepidity of character, mentioned above, may be farther illustrated by the following fact, which occurred a few years ago, near Great Egg Harbor, New Jersey. A woman who happened to be weeding in the garden, had set her child down near, to amuse itself while she was at work; when a sudden and extraordinary rushing sound, and a scream from her child alarmed her, and starting up, she beheld the infant thrown down and dragged some few feet, and a large Bald Eagle bearing off a fragment of its frock, which being the only part seized, and giving way, providentially saved the life of the infant.

The appetite of the Bald Eagle, though habituated to long fasting, is of the most voracious, and often the most indelicate kind. Fish, when he can obtain them, are preferred to all other fare. Young lambs and pigs are dainty morsels, and made free with on all favorable occasions. Ducks, geese, gulls, and other sea-fowl, are also seized with avidity. The most putrid carrion, when nothing better can be had, is acceptable; and the collected groups of gormandizing Vultures, on the approach of this

dignified personage, instantly disperse, and make way for their master, waiting his departure in sullen silence, and at a respectful distance, on the adjacent trees.

In one of those partial migrations of tree squirrels, that sometimes take place in our western forests, many thousands of them were drowned in attempting to cross the Ohio; and at a certain place, not far from Wheeling, a prodigious number of their dead bodies were floated to the shore by an eddy. Here the Vultures assembled in great force, and had regaled themselves for some time, when a Bald Eagle made his appearance, and took sole possession of the premises, keeping the whole Vultures at their proper distance, for several days. He has also been seen navigating the same river on a floating carrion, though scarcely raised above the surface of the water, and tugging at the carcass, regardless of snags, sawyers, planters or shallows. He sometimes carries his tyranny to great extremes against the Vultures. In hard times, when food happens to be scarce, should he accidentally meet with one of these who has its craw crammed with carrion, he attacks it fiercely in air; the cowardly Vulture instantly *disgorges*, and the delicious contents are snatched up by the Eagle before they reach the ground.

The nest of this species is generally fixed on a very large and lofty tree, often in a swamp, or morass, and difficult to be ascended. On some noted tree of this description, often a pine or cypress, the Bald Eagle builds, year after year, for a long series of years. When both male and female have been shot from the nest, another pair has soon after taken possession. The nest is large, being added to, and repaired, every season, until it becomes a black prominent mass, observable at a considerable distance. It is formed of large sticks, sods, earthy rubbish, hay, moss, &c. Many have stated to me that the female lays first a single egg, and that after having sat on it for some time, she lays another; when the first is hatched, the warmth of that, it is pretended, hatches the other. Whether this be correct or not I cannot determine; but a very respectable gentleman of Virginia assured me, that he saw a large tree cut down, containing the nest of a Bald Eagle, in which were two young, one of which appeared nearly three times as large as the other. As a proof of their attachment to their young, a person near Norfolk informed me, that, in clearing a piece of woods on his place, they met with a large dead pine tree, on which was a Bald Eagle's nest and young. The tree being on fire more than half way up, and the flames rapidly ascending, the parent Eagle darted around and among the flames, until her plumage was so much injured that it was with difficulty she could make her escape, and even then, she several times attempted to return to relieve her offspring.

No bird provides more abundantly for its young than the Bald Eagle. Fish are daily carried thither in numbers, so that they sometimes lie

scattered round the tree, and the putrid smell of the nest may be distinguished at the distance of several hundred yards. The young are at first covered with a thick, whitish, or cream-colored cottony down; they gradually become of a gray color, as their plumage develops itself, continue of the brown gray until the third year, when the white begins to make its appearance on the head, neck, tail-coverts and tail; these, by the end of the fourth year, are completely white, or very slightly tinged with cream; the eye also is at first hazel, but gradually brightens into a brilliant straw color, with the white plumage of the head. Such at least was the gradual progress of this change, witnessed by myself, on a very fine specimen, brought up by a gentleman, a friend of mine, who for a considerable time believed it to be what is usually called the Gray Eagle, and was much surprised at the gradual metamorphosis. This will account for the circumstance, so frequently observed, of the Gray and White-headed Eagle being seen together, both being in fact the same species, in different stages of color, according to their difference of age.

The flight of the Bald Eagle, when taken into consideration with the ardor and energy of his character, is noble and interesting. Sometimes the human eye can just discern him, like a minute speck, moving in slow curvatures along the face of the heavens, as if reconnoitring the earth at that immense distance. Sometimes he glides along in a direct horizontal line, at a vast height, with expanded and unmoving wings, till he gradually disappears in the distant blue ether. Seen gliding in easy circles over the high shores, and mountainous cliffs, that tower above the Hudson and Susquehanna, he attracts the eye of the intelligent voyager, and adds great interest to the scenery. At the great cataract of Niagara, already mentioned, there rises from the gulf, into which the fall of the Horse-shoe descends, a stupendous column of smoke, or spray, reaching to the heavens, and moving off in large black clouds, according to the direction of the wind, forming a very striking and majestic appearance. The Eagles are here seen sailing about, sometimes losing themselves in this thick column, and again reappearing in another place, with such ease and elegance of motion, as renders the whole truly sublime.

High o'er the watery uproar, silent seen,
Sailing sedate, in majesty serene,
Now midst the pillared spray sublimely lost,
And now, emerging, down the rapids tossed,
Glides the Bald Eagle, gazing, calm and slow,
O'er all the horrors of the scene below;
Intent alone to sate himself with blood,
From the torn victims of the raging flood.

The White-headed Eagle is three feet long, and seven feet in extent; the bill is of a rich yellow; cere the same, slightly tinged with green;

mouth flesh colored, tip of the tongue bluish black; the head, chief part of the neck, vent, tail-coverts and tail, are white in the perfect or old birds of both sexes, in those under three years of age these parts are of a gray brown; the rest of the plumage is deep dark brown, each feather tipped with pale brown, lightest on the shoulder of the wing, and darkest towards its extremities; the conformation of the wing is admirably adapted for the support of so large a bird; it measures two feet in breadth on the greater quills, and sixteen inches on the lesser; the longest primaries are twenty inches in length, and upwards of one inch in circumference where they enter the skin; the broadest secondaries are three inches in breadth across the vane; the scapulars are very large and broad, spreading from the back to the wing, to prevent the air from passing through; another range of broad flat feathers, from three to ten inches in length, also extends from the lower part of the breast to the wing below, for the same purpose; between these lies a deep triangular cavity; the thighs are remarkably thick, strong, and muscular, covered with long feathers pointing backwards, usually called the femoral feathers; the legs, which are covered half way below the knee, before, with dark brown downy feathers, are of a rich yellow, the color of ripe Indian corn; feet the same; claws blue black, very large and strong, particularly the inner one, which is considerably the largest, soles very rough and warty; the eye is sunk under a bony or cartilaginous projection, of a pale yellow color, and is turned considerably forwards, not standing parallel with the cheeks, the iris is of a bright straw color, pupil black.

The male is generally two or three inches shorter than the female; the white on the head, neck and tail, being more tinged with yellowish, and its whole appearance less formidable; the brown plumage is also lighter, and the bird itself less daring than the female, a circumstance common to almost all birds of prey.

The bird from which the foregoing drawing and description were taken, was shot near Great Egg Harbor, in the month of January last, was in excellent order, and weighed about eleven pounds. Dr. Samuel B. Smith, of this city, obliged me with a minute and careful dissection of it; from whose copious and very interesting notes on the subject, I shall extract such remarks as are suited to the general reader.

“The Eagle you sent me for dissection was a beautiful female. It had two expansions of the gullet. The first principally composed of longitudinal bundles of fibre, in which (as the bird is ravenous and without teeth) large portions of unmasticated meats are suffered to dissolve before they pass to the lower or proper stomach, which is membranous. I did not receive the bird time enough to ascertain whether any chylification was effected by the juices from the vessels of this enlargement of the œsophagus. I think it probable that it also has a regurgitating or

vomiting power, as the bird constantly swallows large quantities of indigestible substances, such as quills, hairs, &c. In this sac of the Eagle, I found the quill feathers of the small white gull; and in the true stomach, the tail and some of the breast feathers of the same bird; and the dorsal vertebræ of a large fish. This excited some surprise, until you made me acquainted with the fact of its watching the Fish-hawks, and robbing them of their prey. Thus we see, throughout the whole empire of animal life, power is almost always in a state of hostility to justice, and of the Deity only can it truly be said, that *justice* is commensurate with *power*!

“The Eagle has the several auxiliaries to digestion and assimilation in common with man. The liver was unusually large in your specimen. It secretes bile, which stimulates the intestines, prepares the chyle for blood, and by this very secretion of bile (as it is a deeply respiring animal), separates or removes some obnoxious principles from the blood. (See Dr. Rush’s admirable lecture on this important viscus in the human subject.) The intestines were also large, long, convolute, and supplied with numerous lacteal vessels, which differ little from those of men, except in color, which was transparent. The kidneys were large, and seated on each side the vertebræ, near the anus. They are also destined to secrete some offensive principles from the blood.

“The eggs were small and numerous; and after a careful examination, I concluded that no sensible increase takes place in them till the *particular* season. This may account for the unusual excitement which prevails in these birds in the sexual intercourse. Why there are so many eggs is a mystery. It is perhaps consistent with natural law, that everything should be abundant; but from this bird, it is said, no more than two young are hatched in a season, consequently no more eggs are wanted than a sufficiency to produce that effect. Are the eggs numbered originally, and is there no increase of number, but a gradual loss, till all are deposited? If so, the number may correspond to the long life and vigorous health of this noble bird. Why there is but two young in a season, is easily explained. Nature has been studiously parsimonious of her physical strength, from whence the tribes of animals incapable to resist, derive security and confidence.”

The Eagle is said to live to a great age, sixty, eighty, and as some assert, one hundred years. This circumstance is remarkable, when we consider the seeming intemperate habits of the bird. Sometimes fasting through necessity, for several days, and at other times gorging itself with animal food, till its craw swells out the plumage of that part, forming a large protuberance on the breast. This, however, is its natural food, and for these habits its whole organization is particularly adapted. It has not, like men, invented rich wines, ardent spirits, and a thousand artificial poisons, in the form of soups, sauces, and sweetmeats. Its food

is simple, it indulges freely, uses great exercise, breathes the purest air, is healthy, vigorous and long-lived. The lords of the creation themselves might derive some useful hints from these facts, were they not already, in general, too wise, or too proud, to learn from their *inferiors*, the fowls of the air and beasts of the field.

FALCO OSSIFRAGUS.*

SEA EAGLE.

[Plate LV. Fig. 2.]

Sea Eagle, Arct. Zool. p. 194, No. 86, A.

THIS eagle inhabits the same countries, frequents the same situations, and lives on the same kind of food, as the Bald Eagle, with whom it is often seen in company. It resembles this last so much in figure, size, form of the bill, legs and claws, and is so often seen associating with it, both along the Atlantic coast, and in the vicinity of our lakes and large rivers, that I have strong suspicions, notwithstanding ancient and very respectable authorities to the contrary, of its being the same species, only in a different stage of color.

That several years elapse before the young of the Bald Eagle receive the white head, neck and tail; and that during the intermediate period their plumage strongly resembles that of the Sea Eagle, I am satisfied from my own observation on three several birds kept by persons of this city. One of these belonging to the late Mr. Enslen, collector of natural subjects for the Emperor of Austria, was confidently believed by him to be the Black, or Sea Eagle, until the fourth year, when the plumage on the head, tail and tail-coverts, began gradually to become white; the bill also exchanged its dusky hue for that of yellow; and before its death, this bird, which I frequently examined, assumed the perfect dress of the full-plumaged Bald Eagle. Another circumstance corroborating these suspicions, is the variety that occurs in the colors of the Sea Eagle. Scarcely two of these are found to be alike, their plumage being more or less diluted with white. In some, the chin, breast and tail-coverts, are of a deep brown; in others nearly white; and in all evidently unfixed, and varying to a pure white. Their place and manner of building, on high trees, in the neighborhood of lakes, large rivers, or the ocean, exactly similar to the Bald Eagle, also strengthens the belief. At the celebrated cataract of Niagara, great numbers of these birds,

* This is not a distinct species, but the young of the preceding, the *Falco leucocephalus*.

called there Gray Eagles, are continually seen sailing high and majestically over the watery tumult, in company with the Bald Eagles, eagerly watching for the mangled carcasses of those animals that have been hurried over the precipice, and cast up on the rocks below, by the violence of the rapids. These are some of the circumstances on which my suspicions of the identity of those two birds are founded. In some future part of the work, I hope to be able to speak with more certainty on this subject.

Were we disposed, after the manner of some, to substitute for plain matters of fact all the narratives, conjectures, and fanciful theories of travellers, voyagers, compilers, &c., relative to the history of the Eagle, the volumes of these writers, from Aristotle down to his admirer the Count de Buffon, would furnish abundant materials for this purpose. But the author of the present work feels no ambition to excite surprise and astonishment at the expense of truth, or to attempt to elevate and embellish his subject beyond the plain realities of nature. On this account, he cannot assent to the assertion, however eloquently made, in the celebrated parallel drawn by the French naturalist between the Lion and the Eagle, viz., that the Eagle, like the Lion, "disdains the possession of that property which is not the fruit of his own industry, and rejects with contempt the prey which is not procured by his own exertions;" since the very reverse of this is the case in the conduct of the Bald and the Sea Eagle, who, during the summer months, are the constant plunderers of the Osprey or Fish-Hawk, by whose industry alone both are usually fed. Nor that "*though famished for want of prey, he disdains to feed on carrion,*" since we have ourselves seen the Bald Eagle, while seated on the dead carcass of a horse, keep a whole flock of Vultures at a respectful distance, until he had fully sated his own appetite. The Count has also taken great pains to expose the ridiculous opinion of Pliny, who conceived that the Ospreys formed no separate race, and that they proceeded from the intermixture of different species of Eagles, the young of which were not Ospreys, only Sea Eagles; "*which Sea Eagles,*" says he, "*breed small Vultures, which engender great Vultures that have not the power of propagation.*"* But, while laboring to confute these absurdities, the Count himself, in his belief of an occasional intercourse between the Osprey and the Sea Eagle, contradicts all actual observation, and one of the most common and fixed laws of nature; for it may be safely asserted, that there is no habit more universal among the feathered race, in their natural state, than that chastity of attachment, which confines the amours of individuals to those of their own species only. That perversion of nature produced by domestication is nothing to the purpose. In no instance

* Hist. Nat. lib. x., c. 3.

have I ever observed the slightest appearance of a contrary conduct. Even in those birds which never build a nest for themselves, nor hatch their young, nor even pair, but live in a state of general concubinage: such as the Cuckoo of the old, and the Cow Bunting of the new continent; there is no instance of a deviation from this striking habit. I cannot therefore avoid considering the opinion above alluded to, that "the male Osprey by coupling with the female Sea Eagle produces Sea Eagles; and that the female Osprey by pairing with the male Sea Eagle gives birth to Ospreys"* or Fish-Hawks, as altogether unsupported by facts, and contradicted by the constant and universal habits of the whole feathered race in their state of nature.

The Sea Eagle is said by Salerne to build on the loftiest oaks a very broad nest, into which it drops two large eggs, that are quite round, exceedingly heavy, and of a dirty white color. Of the precise time of building we have no account, but something may be deduced from the following circumstance. In the month of May, while on a shooting excursion along the sea-coast, not far from Great Egg Harbor, accompanied by my friend Mr. Ord, we were conducted about a mile into the woods, to see an Eagle's nest. On approaching within a short distance of the place, the bird was perceived slowly retreating from the nest, which we found occupied the centre of the top of a very large yellow pine. The woods were cut down, and cleared off for several rods around the spot, which, from this circumstance, and the stately erect trunk, and large crooked wriggling branches of the tree, surmounted by a black mass of sticks and brush, had a very singular and picturesque effect. Our conductor had brought an axe with him to cut down the tree; but my companion, anxious to save the eggs, or young, insisted on ascending to the nest, which he fearlessly performed, while we stationed ourselves below, ready to defend him in case of an attack from the old Eagles. No opposition, however, was offered; and on reaching the nest, it was found, to our disappointment, empty. It was built of large sticks, some of them several feet in length; within which lay sods of earth, sedge, grass, dry reeds, &c., &c., piled to the height of five or six feet, by more than four in breadth; it was well lined with fresh pine tops, and had little or no concavity. Under this lining lay the recent exuviae of the young of the present year, such as scales of the quill feathers, down, &c. Our guide had passed this place late in February, at which time both male and female were making a great noise about the nest; and from what we afterwards learnt, it is highly probable it contained young, even at that early time of the season.

A few miles from this is another Eagle's nest, built also on a pine tree, which, from the information received from the proprietor of the

* Buffon, vol. I., p. 80, Trans.

woods, had been long the residence of this family of Eagles. The tree on which the nest was originally built had been for time immemorial, or at least ever since he remembered, inhabited by these Eagles. Some of his sons cut down this tree to procure the young, which were two in number; and the Eagles soon after commenced building another nest on the very next adjoining tree, thus exhibiting a very particular attachment to the spot. The Eagles, he says, make it a kind of *home* and *lodging place* in all seasons. This man asserts, that the Gray, or Sea Eagles, are the young of the Bald Eagle, and that they are several years old before they begin to breed. It does not drive its young from the nest like the Osprey, or Fish-Hawk; but continues to feed them long after they leave it.

The bird from which the figure in the plate was drawn, and which is reduced to one-third the size of life, measured three feet in length, and upwards of seven feet in extent. The bill was formed exactly like that of the Bald Eagle, but of a dusky brown color; cere and legs bright yellow; the latter as in the Bald Eagle, feathered a little below the knee; irides a bright straw color; head above, neck and back streaked with light brown, deep brown and white, the plumage being white, tipped and centred with brown; scapulars brown; lesser wing-coverts very pale, intermixed with white; primaries black, their shafts brownish white; rump pale brownish white; tail rounded, somewhat longer than the wings when shut, brown on the exterior vanes, the inner ones white, sprinkled with dirty brown; throat, breast and belly, white, dashed and streaked with different tints of brown and pale yellow; vent brown, tipped with white; femorals dark brown, tipped with lighter; auriculars brown, forming a bar from below the eye backwards; plumage of the neck long, narrow and pointed, as is usual with the Eagles, and of a brownish color tipped with white.

The Sea Eagle is said by various authors to hunt at night as well as during the day; and that besides fish it feeds on chickens, birds, hares and other animals. It is also said to catch fish during the night; and that the noise of its plunging into the water is heard at a great distance. But in the descriptions of these writers this bird has been so frequently confounded with the Osprey, as to leave little doubt that the habits and manners of the one have been often attributed to both; and others added that are common to neither.

NOTE—In Wilson's history of the Bald Eagle, he confidently asserts that it is the same species as the Sea Eagle, in a different stage of color. In his account of the latter, he adduces additional reasons for his belief, which is at variance with the opinions of some of the most respectable naturalists of Europe. We have no hesitation, from our own experience, in pronouncing these birds to be the same; and deem it unnecessary to

add anything further on the subject, as the reasoning of Wilson is conclusive.

Our author describes an Eagle's nest, which he visited, in company with the writer of this article, on the eighteenth of May, 1812. It was then empty; but from every appearance a brood had been hatched and reared in it that season. The following year, on the first day of March, a friend of ours took from the same nest three eggs, the largest of which measured three inches and a quarter in length, two and a quarter in diameter, upwards of seven in circumference, and weighed four ounces five drams, apothecaries weight; the color a dirty yellowish white—one was of a very pale bluish white; the young were perfectly formed. Such was the solicitude of the female to preserve her eggs, that she did not abandon the nest, until several blows, with an axe, had been given the tree.

In the history of Lewis and Clark's Expedition, we find the following account of an Eagle's nest, which must have added not a little to the picturesque effect of the magnificent scenery at the Falls of the Missouri:

"Just below the upper pitch is a little island in the middle of the river, well covered with timber. Here on a cottonwood tree an Eagle had fixed its nest, and seemed the undisputed mistress of a spot, to contest whose dominion neither man nor beast would venture across the gulfs that surround it, and which is further secured by the mist rising from the falls."*

The Bald Eagle was observed, by Lewis and Clark, during their whole route to the Pacific Ocean.

It may gratify some of our readers to be informed, that the opinion of Temminck coincides with ours respecting the identity of *our* Bald and Sea Eagles; but he states that the *Falco ossifragus* of Gmelin, the Sea Eagle of Latham, is the young of the *Falco albicilla*, which in its first year so much resembles the yearling of the *leucocephalus*, that it is very difficult to distinguish them.—*Note by Mr. Ord.*

* Hist. of the Exped. vol. i., p. 264.

SPECIES V. *FALCO FULVUS*.

RING-TAIL EAGLE.

[Plate LV. Fig. 1, young bird.]

LINN. *Syst.* ed. 10, p. 88.—*Black Eagle*, *Arct. Zool.* p. 195, No. 87.—LATH. I., 32, No. 6.—*White-tailed Eagle*, EDW. I., 1.—*L'Aigle Commun*, BUFF. I., 86. *Pl. Enl.* 409.—BEWICK, I., p. 49.

THE reader is now presented with a portrait of this celebrated Eagle, drawn from a fine specimen shot in the county of Montgomery, Pennsylvania. The figure here given, though reduced to one-third the size of life, is strongly characteristic of its original. With respect to the habits of the species, such particulars only shall be selected as are well authenticated, rejecting whatever seems vague, or savors too much of the marvellous.

This noble bird, in strength, spirit and activity, ranks among the first of its tribe. It is found, though sparingly dispersed, over the whole temperate and arctic regions, particularly the latter; breeding on high precipitous rocks; always preferring a mountainous country. In its general appearance it has great resemblance to the Golden Eagle, from which, however, it differs in being rather less; as also in the colors and markings of the tail; and, as it is said, in being less noisy. When young, the color of the body is considerably lighter, but deepens into a blackish brown as it advances in age.

The tail feathers of this bird are highly valued by the various tribes of American Indians, for ornamenting their calumets, or Pipes of Peace. Several of these pipes, which were brought from the remote regions of Louisiana by Captain Lewis, were deposited in Peale's Museum, each of which had a number of the tail feathers of this bird attached to it. The Northern as well as Southern Indians seem to follow the like practice, as appears by the numerous calumets, formerly belonging to different tribes.

Pennant informs us, that the independent Tartars train this Eagle for the chase of hares, foxes, wolves, antelopes, &c., and that they esteem the feathers of the tail the best for pluming their arrows. The Ring-tail Eagle is characterized by all as a generous-spirited and docile bird; and various extraordinary incidents are related of it by different writers, not, however, sufficiently authenticated to deserve repetition. The truth is, the solitary habits of the Eagle now before us, the vast inaccessible cliffs to which it usually retires, united with the scarcity of the species in those regions inhabited by man, all combine to render a

particular knowledge of its manners very difficult to be obtained. The author has, once or twice, observed this bird sailing along the alpine declivities of the White Mountains of New Hampshire, early in October, and again, over the Highlands of Hudson's river, not far from West Point. Its flight was easy, in high circuitous sweeps, its broad white tail, tipped with brown, expanded like a fan. Near the settlements on Hudson's Bay it is more common; and is said to prey on hares, and the various species of Grouse which abound there. Buffon observes, that though other Eagles also prey upon hares, this species is a more fatal enemy to those timid animals, which are the constant object of their search, and the prey which they prefer. The Latins, after Pliny, termed the Eagle *Valeria*, *quasi valens viribus*, because of its strength, which appears greater than that of the other Eagles in proportion to its size.

The Ring-tail Eagle measures nearly three feet in length; the bill is of a brownish horn color; the cere, sides of the mouth and feet yellow; iris of the eye reddish hazel, the eye turned considerably forwards; eyebrow remarkably prominent, projecting over the eye, and giving a peculiar sternness to the aspect of the bird; the crown is flat; the plumage of the head, throat and neck, long and pointed; that on the upper part of the head and neck very pale ferruginous; fore part of the crown black; all the pointed feathers are shafted with black; whole upper parts dark blackish brown; wings black; tail rounded, long, of a white or pale cream color minutely sprinkled with specks of ash and dusky, and ending in a broad band of deep dark brown, of nearly one-third its length; chin, cheeks and throat, black; whole lower parts a deep dark brown, except the vent and inside of the thighs, which are white, stained with brown; legs thickly covered to the feet with brownish white down or feathers; claws black, very large, sharp and formidable, the hind one full two inches long.

The Ring-tail Eagle is found in Russia, Switzerland, Germany, France, Scotland, and the northern parts of America. As Marco Polo, in his description of the customs of the Tartars, seems to allude to this species, it may be said to inhabit the whole circuit of the arctic regions of the globe. The Golden Eagle, on the contrary, is said to be found only in the more warm and temperate countries of the ancient continent.* Later discoveries, however, have ascertained it to be also an inhabitant of the United States.†

* Buffon, vol. i., p. 56, Trans.

† Naturalists being now of opinion that the Ring-tail Eagle and the Golden Eagle are the same, we add the following synonymes:—*Yellow-headed Eagle*, *Arct. Zool.* No. 86. *D.*—*Golden Eagle*, *LATH. Syn.* 1, 31, No. 5.—*Pl. Enl.* 410.—*Falco fulvus*, *Ind. Orn.* 1., No. 4; *F. chrysaëtos*, *Id.* No. 8; *F. melanonotus*, *Id.* No. 26; *F. melanæctus*, *Id.* No. 3.—*Aigle royal*, *TEMM. Man. d'Orn.* 1., p. 38.

SPECIES VI. *FALCO HALLÆTUS*.

FISH-HAWK, OR OSPREY.

[Plate XXXVII. Fig. 1.]

Carolina Osprey, LATH. *Syn.* I., p. 46, No. 26, A.—*Falco Piscator*, BRISS. I., p. 361, No. 14; 362, No. 15.—*Faucon pêcheur de la Caroline*, BUFF. I., p. 142.—*Fishing Hawk*, CATESB. *Car.* I., p. 2.—*Falco Carolinensis*, GMEL. *Syst.* I., p. 263, No. 26.*

THIS formidable, vigorous-winged, and well-known bird subsists altogether on the finny tribes that swarm in our bays, creeks, and rivers; procuring his prey by his own active skill and industry; and seeming no farther dependent on the land than as a mere resting-place, or in the usual season, a spot of deposit for his nest, eggs and young. The figure here given is reduced to one-third the size of life, to correspond with that of the Bald Eagle, his common attendant, and constant plunderer.

The Fish-Hawk is migratory; arriving on the coasts of New York and New Jersey about the twenty-first of March, and retiring to the south about the twenty-second of September. Heavy equinoctial storms may vary these periods of arrival and departure a few days; but long observation has ascertained, that they are kept with remarkable regularity. On the arrival of these birds in the northern parts of the United States, in March, they sometimes find the bays and ponds frozen, and experience a difficulty in procuring fish for many days. Yet there is no instance on record of their attacking birds, or inferior land animals, with intent to feed upon them; though their great strength of flight, as well as of feet and claws, would seem to render this no difficult matter. But they no sooner arrive, than they wage war on the Bald Eagles, as against a horde of robbers and banditti; sometimes succeeding, by force of numbers and perseverance, in driving them from their haunts; but seldom or never attacking them in single combat.

The first appearance of the Fish-Hawk in spring, is welcomed by the fishermen, as a happy signal of the approach of those vast shoals of herring, shad, &c. &c., that regularly arrive on our coasts, and enter our rivers in such prodigious multitudes. Two of a trade, it is said, seldom agree; the adage, however, will not hold good in the present case, for such is the respect paid the Fish-Hawk not only by this class

* The following synonymes may be added: *Le Balbuzard*, BUFF. *Pl. Enl.* 414. *Aquila piscatrix*, VIEILLLOT, *Ois. de l'Am. Sept.* v. I., p. 29, pl. 4.

of men, but generally, by the whole neighborhood where it resides, that a person who should attempt to shoot one of them, would stand a fair chance of being insulted. This prepossession in favor of the Fish-Hawk is honorable to their feelings. They associate with its first appearance ideas of plenty, and all the gaiety of business; they see it active and industrious like themselves; inoffensive to the productions of their farms; building with confidence, and without the least disposition to concealment, in the middle of their fields, and along their fences; and returning year after year regularly to its former abode.

The nest of the Fish-Hawk is usually built on the top of a dead or decaying tree, sometimes not more than fifteen, often upwards of fifty feet, from the ground. It has been remarked by the people of the seacoasts, that the most thriving tree will die in a few years, after being taken possession of by the Fish-Hawk. This is attributed to the fish-oil, and to the excrements of the bird; but is more probably occasioned by the large heap of wet, salt materials, of which it is usually composed. In my late excursions to the seashore I ascended to several of these nests, that had been built in from year to year, and found them constructed as follows; externally large sticks, from half an inch to an inch and a half in diameter, and two or three feet in length, piled to the height of four or five feet, and from two to three feet in breadth; these were intermixed with corn-stalks, sea-weed, pieces of wet turf in large quantities, mullein-stalks, and lined with dry sea-grass; the whole forming a mass very observable at half a mile's distance, and large enough to fill a cart, and form no inconsiderable load for a horse. These materials are so well put together, as often to adhere in large fragments after being blown down by the wind. My learned and obliging correspondent of New York, Dr. Samuel L. Mitchill, observes, that "A sort of superstition is entertained in regard to the Fish-Hawk. It has been considered a fortunate incident to have a nest, and a pair of these birds, on one's farm. They have therefore been generally respected; and neither the axe nor the gun has been lifted against them. Their nest continues from year to year, The same couple, or another as the case may be, occupies it season after season. Repairs are duly made, or when demolished by storms it is industriously rebuilt. There was one of these nests, formerly upon the leafless summit of a venerable chestnut-tree, on our farm, directly in front of the house, at the distance of less than a half mile. The withered trunk and boughs, surmounted by the coarse wrought and capacious nest, was a more picturesque object than an obelisk. And the flights of the Hawks as they went forth to hunt—returned with their game—exercised themselves in wheeling round and round and circling about it, were amusing to the beholder almost from morning to night. The family of these Hawks, old and young, was killed by the Hessian *Jagers*. A succeeding

pair took possession of the nest; but in the course of time, the prongs of the trunk so rotted away, that the nest could no longer be supported. The Hawks have been obliged to seek new quarters. We have lost this part of our prospect; and our trees have not afforded a convenient site for one of their habitations since."

About the first of May the female Fish-Hawk begins to lay her eggs, which are commonly three in number, sometimes only two, and rarely four. They are somewhat larger than those of the common hen, and nearly of the same shape. The ground color varies, in different eggs, from a reddish cream, to nearly a white, splashed and daubed all over with dark Spanish brown, as if done by art.* During the time the female is sitting, the male frequently supplies her with fish; though she occasionally takes a short circuit to sea herself, but quickly returns again. The attention of the male, on such occasions, is regulated by the circumstances of the case. A pair of these birds, on the south side of Great Egg Harbor river, and near its mouth, were noted for several years. The female having but one leg was regularly furnished, while sitting, with fish in such abundance, that she seldom left the nest, and never to seek for food. This kindness was continued both before and after incubation. Some animals who claim the name and rationality of man might blush at the recital of this fact.

On the appearance of the young, which is usually about the last of June, the zeal and watchfulness of the parents are extreme. They stand guard, and go off to fish, alternately; one parent being always within a short distance of the nest. On the near approach of any person, the Hawk utters a plaintive whistling note, which becomes shriller as she takes to wing, and sails around, sometimes making a rapid descent, as if aiming directly for you; but checking her course and sweeping past at a short distance overhead, her wings making a loud whizzing in the air. My worthy friend Mr. Gardiner informs me, that they have been known to fix their claws in a negro's head, who was attempting to climb to their nest; and I had lately a proof of

* Of the palatableness of these eggs I cannot speak from personal experience; but the following incident will show that the experiment has actually been made. A country fellow, near Cape May, on his way to a neighboring tavern, passing a tree on which was a Fish-Hawk's nest, immediately mounted and robbed it of the only egg it contained, which he carried with him to the tavern, and desired the landlord to make it into *egg-nogg*. The tavern-keeper, after a few wry faces, complied with his request, and the fellow swallowed the cordial; but, whether from its effects on the olfactory nerves (for he said it smelt abominably) the imagination, or on the stomach alone, is uncertain, it operated as a most outrageous emetic, and cured the man, for that time at least, of his thirst for *egg-nogg*. What is rather extraordinary, the landlord (Mr. Beasley) assured me, that to all appearance the egg was perfectly fresh.

their daring spirit in this way, though the kindness of a friend, resident for a few weeks at Great Egg Harbor. I had requested of him the favor to transmit me, if possible, a live Fish-Hawk, for the purpose of making a drawing of it, which commission he very faithfully executed; and I think I cannot better illustrate this part of the bird's character than by quoting his letter at large.

"BEASLEY'S, Great Egg Harbor, June 30th, 1811.

"SIR,

"Mr. Beasley and I went to reconnoitre a Fish-Hawk's nest on Thursday afternoon. When I was at the nest I was struck with so great violence, on the crown of the hat, that I thought a hole was made in it. I had ascended fearlessly, and never dreamt of being attacked. I came down quickly. There were in the nest three young ones about the size of pullets, which, though full feathered, were unable to fly. On Friday morning I went again to the nest to get a young one, which I thought I could nurse to a considerable growth, sufficient to answer your purpose, if I could fail to procure an old one, which was represented to me as almost impossible, on account of his shyness, and the danger from his dreadful claws. On taking a young one I intended to lay a couple of snares in the nest, for which purpose I had a strong cord in my pocket. The old birds were on the tree when Captain H. and I approached it. As a defence, profiting by the experience of yesterday, I took a walking stick with me. When I was about half up the tree, the bird I send you struck at me repeatedly with violence; he flew round in a small circle, darting at me at every circuit, and I striking at him. Observing that he always described a circle in the air, before he came at me, I kept a *hawk's eye* upon him, and the moment he passed me, I availed myself of the opportunity to ascend. When immediately under the nest, I hesitated at the formidable opposition I met, as his rage appeared to increase with my presumption in invading his premises. But I mounted to the nest. At that moment he darted directly at me with all his force, whizzing through the air; his choler apparently redoubled. Fortunately for me, I struck him on the extreme joint of the right wing with my stick, which brought him to the ground. During this contest the female was flying round and round at a respectful distance. Captain H. held him till I tied my handkerchief about his legs; the captain felt the effect of his claws. I brought away a young one to keep the old one in a good humor. I put them in a very large coop; the young one ate some fish, when broken and put into its throat; but the old one would not eat for two days. He continued sullen and obstinate, hardly changing his position. He walks about now, and is approached without danger; he takes very little notice of the young one. A Joseph Smith, working in the field where this nest is, had the

curiosity to go up to look at the eggs; the bird clawed his face in a shocking manner; his eye had a narrow escape. I am told that it has never been considered dangerous to approach a Hawk's nest. If this be so, this bird's character is peculiar; his affection for his young, and his valiant opposition to an invasion of his nest, entitle him to conspicuous notice. He is the *Prince* of Fish-Hawks; his character and his portrait seem worthy of being handed to the historic muse. A Hawk more worthy of the honor which awaits him could not have been found. I hope no accident will happen to him, and that he may fully answer your purpose.

“Yours,

“THOMAS SMITH.

“This morning the female was flying to and fro, making a mournful noise.”

The young of the Fish-Hawk are remarkable for remaining long in the nest before they attempt to fly. Mr. Smith's letter is dated June 30th, at which time, he observes, they were as large as pullets, and full feathered. Seventeen days after, I myself ascended to this same Hawk's nest, where I found the two remaining young ones seeming full grown. They made no attempts to fly, though they both placed themselves in a stern posture of defence, as I examined them at my leisure. The female had procured a *second* helpmate; but he did not seem to inherit the spirit of his predecessor, for like a true step-father, he left the nest at my approach, and sailed about at a safe distance with his mate, who showed great anxiety and distress during the whole of my visit. It is universally asserted by the people of the neighborhood where these birds breed, that the young remain so long before they fly, that the parents are obliged at last to compel them to shift for themselves, beating them with their wings, and driving them from the nest. But that they continue to assist them even after this, I know to be a fact from my own observation, as I have seen the young bird meet its parent in the air, and receive from him the fish he carried in his claws.

The flight of the Fish-Hawk, his manœuvres while in search of fish, and his manner of seizing his prey, are deserving of particular notice. In leaving the nest he usually flies direct till he comes to the sea, then sails around in easy curving lines, turning sometimes in the air as on a pivot, apparently without the least exertion, rarely moving the wings, his legs extended in a straight line behind, and his remarkable length and curvature or bend of wing, distinguishing him from all other Hawks. The height at which he thus elegantly glides is various, from one hundred to one hundred and fifty, and two hundred feet, sometimes much higher, all the while calmly reconnoitring the face of the deep below. Suddenly he is seen to check his course, as if struck by a particular object, which he seems to survey for a few moments with such steadiness

that he appears fixed in air, flapping his wings. The object however he abandons, or rather the fish he had in his eye has disappeared, and he is again seen sailing around as before. Now his attention is again arrested, and he descends with great rapidity; but ere he reaches the surface, shoots off on another course, as if ashamed that a second victim had escaped him. He now sails at a short height above the surface, and by a zig-zag descent and without seeming to dip his feet in the water, seizes a fish, which after carrying a short distance, he probably drops, or yields up to the Bald Eagle, and again ascends by easy spiral circles, to the higher regions of the air, where he glides about in all the ease and majesty of his species. At once from this sublime aerial height he descends like a perpendicular torrent, plunging into the sea with a loud rushing sound, and with the certainty of a rifle. In a few moments he emerges, bearing in his claws his struggling prey, which he always carries head foremost; and having risen a few feet above the surface, shakes himself as a water spaniel would do, and directs his heavy and laborious course directly for the land. If the wind blow hard, and his nest lie in the quarter from whence it comes, it is amusing to observe with what judgment and exertion he beats to windward, not in a direct line, that is, *in the wind's eye*, but making several successive tacks to gain his purpose. This will appear the more striking, when we consider the size of the fish which he sometimes bears along. A shad was taken from a Fish-Hawk, near Great Egg Harbor, on which he had begun to regale himself, and had already ate a considerable portion of it, the remainder weighed six pounds. Another Fish-Hawk was passing Mr. Beasley's, at the same place, with a large flounder in his grasp, which struggled and shook him so, that he dropped it on the shore. The flounder was picked up, and served the whole family for dinner. It is singular that the Hawk never descends to pick up a fish which he happens to drop, either on the land or on the water. There is a kind of abstemious dignity in this habit of the Hawk, superior to the gluttonous voracity displayed by most other birds of prey, particularly by the Bald Eagle, whose piratical robberies committed on the present species have been already fully detailed in treating of his history. The Hawk, however, in his fishing pursuits, sometimes mistakes his mark, or overrates his strength, by striking fish too large and powerful for him to manage, by whom he is suddenly dragged under; and though he sometimes succeeds in extricating himself, after being taken three or four times down, yet oftener both parties perish. The bodies of sturgeon, and several other large fish, with that of the Fish-Hawk fast grappled in them, have at different times been found dead on the shore, cast up by the waves.

The Fish-Hawk is doubtless the most numerous of all its genus within the United States. It penetrates far into the interior of the country

up our large rivers, and their head waters. It may be said to line the seacoast from Georgia to Canada. In some parts I have counted, at one view, more than twenty of their nests within half a mile. Mr. Gardiner informs me, that on the small island on which he resides, there are at least "three hundred nests of Fish-Hawks that have young, which, on an average, consume probably not less than six hundred fish daily." Before they depart in the autumn they regularly repair their nests, carrying up sticks, sods, &c., fortifying them against the violence of the winter storms, which, from this circumstance, they would seem to foresee and expect. But, notwithstanding all their precautions, they frequently, on their return in spring, find them lying in ruins around the roots of the tree; and sometimes the tree itself has shared the same fate. When a number of Hawks, to the amount of twenty or upwards, collect together on one tree, making a loud squealing noise, there is generally a nest built soon after on the same tree. Probably this congressional assembly were settling the right of the new pair to the premises; or it might be a kind of wedding, or joyous festive meeting on the occasion. They are naturally of a mild and peaceable disposition, living together in great peace and harmony; for though with them, as in the best regulated communities, instances of attack and robbery occur among themselves, yet these instances are extremely rare. Mr. Gardiner observes that they are sometimes seen high in the air, sailing and cutting strange gambols, with loud vociferations, darting down several hundred feet perpendicular, frequently with part of a fish in one claw, which they seem proud of, and to claim *high hook*, as the fishermen call *him* who takes the greatest number. On these occasions they serve as a barometer to foretell the changes of the atmosphere; for when the Fish-Hawks are seen thus, sailing high in air, in circles, it is universally believed to prognosticate a change of weather, often a thunder storm, in a few hours. On the faith of the certainty of these signs, the experienced coaster wisely prepares for the expected storm, and is rarely mistaken.

There is one singular trait in the character of this bird, which will be mentioned in treating of the Purple Grackle, and which I have had many opportunities of witnessing. The Grakles, or Crow Blackbirds, are permitted by the Fish-Hawk to build their nests among the interstices of the sticks of which his own is constructed. Several pair of Grakles taking up their abode there, like humble vassals around the castle of their chief, laying, hatching their young, and living together in mutual harmony. I have found no less than four of these nests clustered around the sides of the former, and a fifth fixed on the nearest branch of the adjoining tree; as if the proprietor of this last, unable to find an unoccupied corner on the premises, had been anxious to share as much as possible the company and protection of this generous bird.

The Fish-Hawk is twenty-two inches in length, and five feet three

inches in extent ; the bill is deep black, the upper as well as lower cere, (for the base of the lower mandible has a loose movable skin) and also the sides of the mouth, from the nostrils backwards, are light blue ; crown and hind-head pure white, front streaked with brown ; through the eye a bar of dark blackish brown passes to the neck behind, which, as well as the whole upper parts, is deep brown, the edges of the feathers lighter ; shafts of the wing quills brownish white ; tail slightly rounded, of rather a paler brown than the body, crossed with eight bars of very dark brown ; the wings when shut extend about an inch beyond the tail, and are nearly black towards the tips ; the inner vanes of both quill and tail feathers are whitish, barred with brown ; whole lower parts pure white, except the thighs, which are covered with short plumage, and streaked down the fore part with pale brown ; the legs and feet are a very pale light blue, prodigiously strong and disproportionately large, they are covered with flat scales of remarkable strength and thickness, resembling when dry the teeth of a large rasp, particularly on the soles, intended no doubt to enable the bird to seize with more security his slippery prey ; the thighs are long, the legs short, feathered a little below the knee, and as well as the feet and claws large ; the latter hooked into semicircles, black, and very sharp pointed ; the iris of the eye a fiery yellow orange.

The female is full two inches longer ; the upper part of the head of a less pure white, and the brown streaks on the front spreading more over the crown ; the throat and upper part of the breast are also dashed with large blotches of a pale brown, and the bar passing through the eye, not of so dark a brown. The toes of both are exceedingly strong and warty, and the hind claw a full inch and a quarter in diameter. The feathers on the neck and hind-head are long and narrow, and generally erected when the bird is irritated, resembling those of the Eagle. The eye is destitute of the projecting bone common to most of the Falcon tribe, the nostril large, and of a curving triangular shape. On dissection, the two glands on the rump, which supply the bird with oil for lubricating its feathers, to protect them from the wet, were found to be remarkably large, capable, when opened, of admitting the end of the finger, and contained a large quantity of white greasy matter, and some pure yellow oil ; the gall was in small quantity ; the numerous convolutions and length of the intestines surprised me ; when carefully extended they measured within an inch or two of nine feet, and were no thicker than those of a Robin ! The crop, or craw, was middle-sized, and contained a nearly dissolved fish ; the stomach was a large oblong pouch, capable of considerable distension, and was also filled with half-digested fish ; no appearance of a muscular gizzard.

By the descriptions of European naturalists, it would appear that this bird, or one near akin to it, is a native of the Eastern continent in sum-

mer, as far north as Siberia; the Bald Buzzard of Turton almost exactly agreeing with the present species in size, color, and manners, with the exception of its breeding or making its nest among the reeds, instead of on trees. Mr. Bewick, who has figured and described the female of this bird, under the appellation of the "Osprey," says, "that it builds on the ground, among reeds, and lays three or four eggs of an elliptical form, rather less than those of a hen." This difference of habit may be owing to particular local circumstances, such deviations being usual among many of our native birds. The Italians are said to compare its descent upon the water to a piece of lead falling upon that element; and distinguish it by the name of *Aquila piumbina*, or the Leaden Eagle. In the United States it is everywhere denominated the Fish-Hawk, or Fishing-Hawk, a name truly expressive of its habits.

The regular arrival of this noted bird at the vernal equinox, when the busy season of fishing commences, adds peculiar interest to its first appearance, and procures it many a benediction from the fishermen. With the following lines, illustrative of these circumstances, I shall conclude its history:

Soon as the Sun, great ruler of the year!
Bends to our northern climes his bright career;
And from the caves of ocean calls from sleep
The finny shoals and myriads of the deep;
When freezing tempests back to Greenland ride;
And day and night the equal hours divide;
True to the season, o'er our sea-beat shore,
The sailing Osprey high is seen to soar,
With broad unmoving wing; and, circling slow,
Marks each loose straggler in the deep below:
Sweeps down like lightning! plunges with a roar!
And bears his struggling victim to the shore.

The long-housed fisherman beholds with joy
The well-known signals of his rough employ;
And, as he bears his nets and oars along,
He hails the welcome season with a song.

Note.—The Fish-Hawk passes the winter in the southern parts of the United States. In a winter voyage among the sea-islands of Georgia, and thence into East Florida, I did not observe these birds until I reached the river St. John, on the seventh of February. At the mouth of this river, which is noted for the abundance of its fish, the Ospreys are very numerous; and the frequent attacks which are made upon them, when successful in fishing, by the piratical Bald Eagles, afford a spectacle of no common interest. I sometimes took notice, that when the Fish-Hawk was likely to escape from a single enemy, and had wearied his pursuer by the dexterity of his manœuvres, a fresh Eagle joined in the chase, and then all chance of escape was hopeless.

Wilson states, that this species, on the coast of New Jersey, commences laying about the first of May; but I observed it sitting, in East Florida, on the third of March. The weather was then warm: Fahrenheit being at 80° in the shade.—*G. Ord.*

SPECIES VII. *FALCO ATRICAPILLUS*.*

ASH-COLORED, OR BLACK-CAP HAWK.

[Plate LII. Fig. 3.]

OF this beautiful species I can find no precise description. The Ash-colored Buzzard of Edwards differs so much from this, particularly in wanting the fine zig-zag lines below, and the black cap, that I cannot for a moment suppose them to be the same. The individual from which the drawing was made is faithfully represented in the plate, reduced to one-half its natural dimensions. This bird was shot within a few miles of Philadelphia.

Its general make and aspect denote great strength and spirit; its legs are strong, and its claws of more than proportionate size. Should any other specimen or variety of this Hawk, differing from the present, occur during the publication of this work, it will enable me more accurately to designate the species.

The Black-cap Hawk is twenty-one inches in length; the bill and cere are blue; eye reddish amber; crown black, bordered on each side by a line of white, finely speckled with black; these lines of white meet on the hind-head; whole upper parts slate, tinged with brown, slightest on the quills; legs feathered half way down, and, with the feet, of a yellow color; whole lower parts and femorals white, most elegantly speckled with fine transverse pencilled zig-zag lines of dusky, all the shafts being a long black line; vent pure white.

If this be not the celebrated *Goshawk*, formerly so much esteemed in falconry, it is very closely allied to it. I have never myself seen a specimen of that bird in Europe, and the descriptions of their best naturalists vary considerably; but from a careful examination of the

* *Falco-Palumbarius*, LINN. As was suspected by Wilson, this is not a new species, but the celebrated Goshawk. The following synonymes are given by Prince Musignano: *Falco Columbarius*, GMEL. *Syst. I.*, p. 281. LATH.—TEMM.—*F. gentilis*, LINN. GMEL. *Syst. I.*, p. 270. LATH. (young) *F. gallinarius*. LINN. LATH. (very young female.) *L'Autour*, BUFF. *Pl. Enl.* 418. (adult) *L'Autour sors*, BUFF. *Pl. Enl.* 461 (young). *Le Buzard*, BUFF. *Pl. Enl.* 423. (very young female.) See *Journal Acad. Nat. Sc. III.*, p. 346.

figure and account of the Goshawk, given by the ingenious Mr. Bewick (*Brit. Birds*, v. i., p. 65), I have very little doubt that the present will be found to be the same.

The Goshawk inhabits France and Germany; is not very common in South Britain, but more frequent in the northern parts of the island, and is found in Russia and Siberia. Buffon, who reared two young birds of this kind, a male and female, observes, that "the Goshawk before it has shed its feathers, that is, in its first year, is marked on the breast and belly with longitudinal brown spots; but after it has had two moultings they disappear, and their place is occupied by transverse waving bars, which continue during the rest of its life;" he also takes notice, that though the male was much smaller than the female, it was fiercer and more vicious.

Pennant informs us that the Goshawk is used by the emperor of China in his sporting excursions, when he is usually attended by his grand falconer, and a thousand of inferior rank. Every bird has a silver plate fastened to its foot, with the name of the falconer who has the charge of it, that in case it should be lost, it may be restored to the proper person; but if he should not be found, the bird is delivered to another officer, called the *guardian of lost birds*, who, to make his situation known, erects his standard in a conspicuous place among the army of hunters. The same writer informs us, that he examined in the Leverian museum, a specimen of the Goshawk which came from America, and which was superior in size to the European.

SPECIES VIII. *FALCO BOREALIS*.

RED-TAILED HAWK.

[Plate LII. Fig. 1.]

Arct. Zool. p. 205, No. 100.—*American Buzzard*, LATH. I., 50.—TURT. *Syst.* p. 151.
—*F. Aquilinus, cauda ferruginea*, *Great Eagle Hawk*, BARTRAM, p. 290.

THE figure of this bird, and those of the other two Hawks in the same plate, are reduced to exactly half the dimensions of the living subjects. These representations are offered to the public with a confidence in their fidelity; but *these*, I am sorry to say, are almost all I have to give towards elucidating their history. Birds naturally thinly dispersed over a vast extent of country, retiring during summer to the depth of the forests to breed, approaching the habitations of man, like other thieves and plunderers, with shy and cautious jealousy, seldom permitting a near advance, subject to great changes of plumage, and,

since the decline of falconry, seldom or never domesticated, offer to those who wish eagerly to investigate their history, and to delineate their particular character and manners, great and insurmountable difficulties. Little more can be done in such cases than to identify the species, and trace it through the various quarters of the world, where it has been certainly met with.

The Red-tailed Hawk is most frequently seen in the lower parts of Pennsylvania, during the severity of winter. Among the extensive meadows that border the Schuylkill and Delaware, below Philadelphia, where flocks of Larks (*Alauda magna*), and where mice and moles are in great abundance, many individuals of this Hawk spend the greater part of the winter. Others prowl around the plantations, looking out for vagrant chickens; their method of seizing which, is by sweeping swiftly over the spot, and grappling them with their talons, bearing them away to the woods. The bird from which the figure in the plate was drawn, was surprised in the act of feeding on a hen he had just killed, and which he was compelled to abandon. The remains of the chicken were immediately baited to a steel-trap, and early the next morning the unfortunate Red-tail was found a prisoner, securely fastened by the leg. The same hen which the day before he had massacred, was, the very next, made the means of decoying him to his destruction; in the eye of the farmer a system of fair and just retribution.

This species inhabits the whole United States; and, I believe, is not migratory, as I found it in the month of May, as far south as Fort Adams, in the Mississippi territory. The young were at that time nearly as large as their parents, and were very clamorous, making an incessant squealing noise. One, which I shot, contained in its stomach mingled fragments of frogs and lizards.

The Red-tailed Hawk is twenty inches long, and three feet nine inches in extent; bill blue black; cere and sides of the mouth yellow, tinged with green; lores and spot on the under eyelid white, the former marked with fine radiating hairs; eyebrow, or cartilage, a dull eel skin color, prominent, projecting over the eye; a broad streak of dark brown extends from the sides of the mouth backwards; crown and hind-head dark brown, seamed with white and ferruginous; sides of the neck dull ferruginous, streaked with brown; eye large; iris pale amber; back and shoulders deep brown; wings dusky, barred with blackish; ends of the five first primaries nearly black; scapulars barred broadly with white and brown; sides of the tail-coverts white, barred with ferruginous, middle ones dark, edged with rust; tail rounded, extending two inches beyond the wings, and of a bright red brown, with a single band of black near the end, and tipped with brownish white; on some of the lateral feathers are slight indications of the remains of other narrow bars; lower parts brownish white; the breast ferruginous, streaked

with dark brown; across the belly a band of interrupted spots of brown; chin white; femorals and vent pale brownish white, the former marked with a few minute heart-shaped spots of brown; legs yellow, feathered half way below the knees.

This was a male. Another specimen shot within a few days after, agreed in almost every particular of its color and markings with the present; and on dissection was found to be a female.

*FALCO LEVERIANUS?**

AMERICAN BUZZARD.

[Plate LII. Fig. 2.]

It is with some doubt and hesitation that I introduce the present as a distinct species from the preceding. In their size and general aspect they resemble each other considerably; yet I have found both males and females among each; and in the present species I have sometimes found the ground color of the tail strongly tinged with ferruginous, and the bars of dusky but slight; while in the preceding, the tail is sometimes wholly red brown, the single bar of black near the tip excepted; in other specimens evident remains of numerous other bars are visible. In the meantime both are figured, and future observations may throw more light on the matter.

This bird is more numerous than the last; but frequents the same situations in winter. One, which was shot in the wing, lived with me several weeks; but refused to eat. It amused itself by frequently hopping from one end of the room to the other; and sitting for hours at the window, looking down on the passengers below. At first, when approached by any person, he generally put himself in the position in which he is represented; but after some time he became quite familiar, permitting himself to be handled, and shutting his eyes as if quite passive. Though he lived so long without food, he was found on dissection to be exceedingly fat, his stomach being enveloped in a mass of solid fat of nearly an inch in thickness.

The American Buzzard, or White-breasted Hawk, is twenty-two inches long, and four feet in extent; cere pale green; bill pale blue, black at the point; eye bright straw color; eyebrow projecting greatly; head broad, flat and large; upper part of the head, sides of the neck

* *Falco borealis*. Wilson's suspicions of this and the preceding being the same bird, have been confirmed by Prince Musignano. This is the young, the preceding the adult bird.

and back, brown, streaked and seamed with white, and some pale rust; scapulars and wing-coverts spotted with white; wing quills much resembling the preceding species; tail-coverts white, handsomely barred with brown; tail slightly rounded, of a pale brown color, varying in some to a sorrel, crossed by nine or ten bars of black, and tipped for half an inch with white; wings brown, barred with dusky; inner vanes nearly all white; chin, throat and breast, pure white, with the exception of some slight touches of brown that enclose the chin; femorals yellowish white, thinly marked with minute touches of rust; legs bright yellow, feathered half way down; belly broadly spotted with black or very deep brown; the tips of the wings reach to the middle of the tail.

My reason for inclining to consider this a distinct species from the last, is that of having uniformly found the present two or three inches larger than the former, though this may possibly be owing to their greater age.*

SPECIES IX. *FALCO PENNSYLVANICUS*.

SLATE-COLORED HAWK.†

[Plate. XLVI. Fig. 1.]

THIS elegant and spirited little Hawk is a native of Pennsylvania, and of the Atlantic states generally; and is now for the first time introduced to the notice of the public. It frequents the more settled parts of the country, chiefly in winter; is at all times a scarce species; flies wide, very irregular, and swiftly; preys on lizards, mice and small birds, and is an active and daring little hunter. It is drawn of full size, from a very beautiful specimen shot in the neighborhood of Philadelphia. The bird within his grasp is the *Tanagra rubra*, or Black-winged Red-bird,

*Prince Musignano is of opinion that Wilson took his admeasurement of the *borealis* from males, and that of the *leverianus* from females; as he has always found the males in both states of plumage twenty inches (a size which Wilson gives as that of the *borealis*), and the females of both, twenty-two inches (the size of the *leverianus* as given by Wilson).

† By comparing this bird with the Sharp-shinned Hawk, it will be obvious that Wilson had good reason for his first opinion, that they are identical; although he subsequently came to a contrary conclusion. It is probable that they will be found to be the same, and that this is the adult, and the Sharp-shinned Hawk the young bird. If this be the case, the name *velox*, which was first given to this species by Wilson, must be retained; unless indeed it should prove to be identical with the *F. fuscus* of authors, as asserted by Prince Musignano; in which event this latter name must of course, having the priority, be adopted.

in its green or first year's dress. In the spring of the succeeding year the green and yellow plumage of this bird becomes of a most splendid scarlet, and the wings and tail deepen into a glossy black.

The great difficulty of accurately discriminating between different species of the Hawk tribe, on account of the various appearances they assume at different periods of their long lives, at first excited a suspicion that this might be one of those with which I was already acquainted, in a different dress, namely, the Sharp-shinned Hawk, figured in Plate XLV. of this work; for such are the changes of color to which many individuals of this genus are subject, that unless the naturalist has recourse to those parts that are subject to little or no alteration in the full-grown bird, viz. the particular conformation of the legs, nostrils, tail, and the relative length of the latter to that of the wings, also the peculiar character of the countenance, he will frequently be deceived. By comparing these, the same species may often be detected under a very different garb. Were all these changes accurately known, there is no doubt but the number of species of this tribe, at present enumerated, would be greatly diminished; the same bird having been described, by certain writers, three, four, and even five different times, as so many distinct species. Testing, however, the present Hawk by the rules above-mentioned, I have no hesitation in considering it as a species different from any hitherto described; and I have classed it accordingly.

The Slate-colored Hawk is eleven inches long; and twenty-one inches in extent; bill blue black; cere and sides of the mouth dull green; eyelid yellow; eye deep sunk under the projecting eyebrow, and of a fiery orange color; upper parts of a fine slate; primaries brown black, and, as well as the secondaries, barred with dusky; scapulars spotted with white and brown, which is not seen unless the plumage be separated by the hand; all the feathers above are shafted with black; tail very slightly forked, of an ash color, faintly tinged with brown, crossed with four broad bands of black, and tipped with white; tail three inches longer than the wings; over the eye extends a streak of dull white; chin white mixed with fine black hairs; breast and belly beautifully variegated with ferruginous and transverse spots of white; femorals the same; vent pure white, legs long, very slender, and of a rich orange yellow; claws black, large, and remarkably sharp; lining of the wing thickly marked with heart-shaped spots of black. This bird on dissection was found to be a male. In the month of February, I shot another individual of this species, near Hampton in Virginia, which agreed almost exactly with the present.

FALCO VELOX.

SHARP-SHINNED HAWK.

[Plate XLV. Fig. 1, Female.]

THIS is a bold and daring species, hitherto unknown to naturalists. The only Hawk we have which approaches near it in color is the Pigeon Hawk, figured in Plate XV. But there are such striking differences in the present, not only in color, but in other respects, as to point out decisively its claims to rank as a distinct species. Its long and slender legs and toes; its red fiery eye, feathered to the eyelids; its triangular grooved nostril, and length of tail, are all different from the Pigeon Hawk, whose legs are short, its eyes dark hazel, surrounded with a broad bare yellow skin, and its nostrils small and circular, centred with a slender point, that rises in it like the pistil of a flower. There is no Hawk mentioned by Pennant, either as inhabiting Europe or America, agreeing with this. I may therefore, with confidence, pronounce it a nondescript; and have chosen a very singular peculiarity which it possesses, for its specific appellation.

This Hawk was shot on the banks of the Schuylkill, near Mr. Bartram's. Its singularity of flight surprised me long before I succeeded in procuring it. It seemed to throw itself from one quarter of the heavens to the other, with prodigious velocity, inclining to the earth; swept suddenly down into a thicket, and instantly re-appeared with a small bird in its talons. This feat I saw it twice perform, so that it was not merely an accidental manœuvre. The rapidity and seeming violence of these zig-zag excursions were really remarkable, and appeared to me to be for the purpose of seizing his prey by sudden surprise, and main force of flight. I kept this Hawk alive for several days, and was hopeful I might be able to cure him; but he died of his wound.

On the 15th of September, two young men whom I had despatched on a shooting expedition, met with this species on one of the ranges of the Alleghany. It was driving around in the same furious headlong manner, and had made a sweep at a red squirrel, which eluded its grasp, and itself became the victim. These are the only individuals of this bird I have been able to procure, and fortunately they were male and female.

The female of this species (represented in the plate) is thirteen inches long, and twenty-five inches in extent; the bill is black towards the point on both mandibles, but light blue at its base; cere a fine pea green; sides of the mouth the same; lores pale whitish blue, beset with

hairs; crown and whole upper parts very dark brown, every feather narrowly skirted with a bright rust color; over the eye a stripe of yellowish white, streaked with deep brown; primaries spotted on their inner vanes with black; secondaries crossed on both vanes with three bars of dusky, below the coverts; inner veins of both primaries and secondaries brownish white; all the scapulars marked with large round spots of white, not seen unless the plumage be parted with the hand; tail long, nearly even, crossed with four bars of black, and as many of brown ash, and tipped with white; throat and whole lower parts pale yellowish white; the former marked with fine long pointed spots of dark brown, the latter with large oblong spots of reddish brown; femorals thickly marked with spade-formed spots, on the pale rufous ground; legs long and feathered a little below the knee, of a greenish yellow color, most yellow at the joints; edges of the inside of the shins below the knee, projecting like the edge of a knife, hard and sharp, as if intended to enable the bird to hold its prey with more security between them; eye, sunk below a projecting cartilage, iris bright yellow.

The male was nearly two inches shorter; the upper parts dark brown; the feathers skirted with pale reddish, the front also streaked with the same; cere greenish yellow; lores bluish; bill black, as in the female; streak over the eye lighter than in the former; chin white; breast the same, streaked with brown; bars on the tail rather narrower, but in tint and number the same; belly and vent white; feet and shins exactly as in the female; the toes have the same pendulous lobes, which mark those of the female, and of which the representation in the plate will give a correct idea; the wings barred with black, very noticeable on the lower side.

Since writing the above, I have shot another specimen of this Hawk, corresponding in almost every particular with the male last mentioned; and which, on dissection, also proves to be a male. This last had within the grasp of his sharp talons a small lizard, just killed, on which he was about to feed. How he contrived to get possession of it appeared to me matter of surprise, as lightning itself seems scarcely more fleet than this little reptile. So rapid are its motions, that, in passing from one place to another, it vanishes, and actually eludes the eye in running a distance of twelve or fifteen feet. It is frequently seen on fences that are covered with gray moss and lichen, which in color it very much resembles; it seeks shelter in hollow trees, and also in the ground about their decayed roots. They are most numerous in hilly parts of the country, particularly on the declivities of the Blue Mountain, among the crevices of rocks and stones. When they are disposed to run, it is almost impossible to shoot them, as they disappear at the first touch of the trigger. For the satisfaction of the curious, I have intro-

duced a full-sized figure of this lizard, which is known in many parts of the country by the name of the Swift.

SPECIES X. *FALCO PENNSYLVANICUS*.*

BROAD-WINGED HAWK.

[Plate LIV. Fig. 1.]

THIS new species, as well as the rest of the figures in the same plate, is represented of the exact size of life. The Hawk was shot on the sixth of May, in Bartram's woods, near the Schuylkill, and was afterwards presented to Mr. Peale. It was perched upon the dead limb of a high tree, feeding on something, which was afterwards found to be the meadow mouse, figured in Plate L. On my approach, it uttered a whining kind of whistle, and flew off to another tree, where I followed and shot it. Its great breadth of wing, or width of the secondaries, and also of its head and body, when compared with its length, struck me as peculiarities. It seemed a remarkably strong-built bird, handsomely marked, and was altogether unknown to me. Mr. Bartram, who examined it very attentively, declared he had never before seen such a Hawk. On the afternoon of the next day I observed another, probably its mate or companion, and certainly one of the same species, sailing about over the same woods. Its motions were in wide circles, with unmoving wings, the exterior outline of which seemed a complete semicircle. I was extremely anxious to procure this also if possible; but it was attacked and driven away by a King-bird before I could effect my purpose, and I have never since been fortunate enough to meet with another. On dissecting the one which I had shot, it proved to be a male.

In size this Hawk agrees, nearly, with the *Buzzardet* (*Falco albidus*) of Turton, described also by Pennant; (Arct. Zool. N. 109.) but either the descriptions of these authors are very inaccurate, the change of color which that bird undergoes very great, or the present is altogether a different species. Until, however, some other specimens of this Hawk come under my observation, I can only add to the figure here

* The name *Pennsylvanicus*, was given by Wilson to this bird, through inadvertence, he having already given that name to the Slate-colored Hawk, which is a distinct species from the present, as Wilson was well aware. Mr. Ord, in the reprint of this work, called it *F. latissimus*. But should the Slate-colored Hawk (*F. Pennsylvanicus*) and the Sharp-shinned Hawk (*F. velox*), prove to be the same species, then the name *Pennsylvanicus* must be retained for this species, that of *velox* being adopted for the former.

given, and which is a good likeness of the original, the following particulars of its size and plumage.

Length fourteen inches, extent thirty-three inches; bill black, blue near the base, slightly toothed; cere and corners of the mouth yellow; irides bright amber; frontlet and lores white; from the mouth backwards runs a streak of blackish brown; upper parts dark brown, the plumage tipped, and the head streaked, with whitish; almost all the feathers above are spotted or barred with white; but this is not seen unless they be separated by the hand; head large, broad and flat; cere very broad, the nostril also large; tail short, the exterior and interior feathers somewhat the shortest, the others rather longer, of a full black, and crossed with two bars of white, tipped also slightly with whitish; tail-coverts spotted with white; wings dusky brown, indistinctly barred with black; greater part of the inner vanes snowy; lesser coverts, and upper part of the back, tipped and streaked with bright ferruginous; the bars of black are very distinct on the lower side of the wing; lining of the wing brownish white, beautifully marked with small arrow-heads of brown; chin white, surrounded by streaks of black; breast and sides elegantly spotted with large arrow-heads of brown, centred with pale brown; belly and vent, like the breast, white, but more thinly marked with pointed spots of brown; femorals brownish white, thickly marked with small touches of brown and white; vent white; legs very stout; feet coarsely scaled, both of a dirty orange yellow; claws semicircular, strong and very sharp, hind one considerably the largest.

While examining the plumage of this bird, a short time after it was shot, one of those winged ticks, with which many of our birds are infested, appeared on the surface of the feathers, moving about, as they usually do, backwards or sidewise, like a crab, among the plumage, with great facility. The Fish-Hawk, in particular, is greatly pestered with these vermin, which occasionally leave him as suits their convenience. A gentleman, who made the experiment, assured me, that on plunging a live Fish-Hawk under water, several of these winged ticks remained hovering over the spot, and the instant the hawk rose above the surface, darted again among his plumage. The experiment was several times made, with the like result. As soon, however, as these parasites perceive the dead body of their patron beginning to become cold, they abandon it; and if the person who holds it have his head uncovered, dive instantly among his hair, as I have myself frequently experienced; and though driven thence, repeatedly return, till they are caught and destroyed. There are various kinds of these ticks: the one found on the present Hawk is figured beside him. The head and thorax were light brown; the legs, six in number, of a bright green, their joints moving almost horizontally, and thus enabling the creature to pass with the greatest ease between the laminae of feathers; the

wings were single, of a dark amber color, and twice as long as the body, which widened towards the extremity, where it was slightly indented; feet two clawed.

This insect lived for several days between the crystal and dial-plate of a watch, carried in the pocket; but being placed for a few minutes in the sun, fell into convulsions and died.

SPECIES XI. *FALCO FURCATUS*.*

SWALLOW-TAILED HAWK.

[Plate LI. Fig. 2.]

LINN. *Syst.* 129.—LATH. I., 60.—*Hirundo maxima Peruviana avis prædatoris calcaribus instructa*, FEUILLEE, *Voy. Peru*, tom. II., 33.—CATESB. I., 4.—*Le Milan de la Caroline*, BRISS. I., 418.—BUFF. I., 221.—TURT. *Syst.* 149.—*Arct. Zool.* p. 210, No. 108.

THIS very elegant species inhabits the southern districts of the United States in summer; is seldom seen as far north as Pennsylvania, but is very abundant in South Carolina and Georgia, and still more so in West Florida, and the extensive prairies of Ohio and the Indiana Territory. I met with these birds, in the early part of May, at a place called Duck Creek, in Tennessee, and found them sailing about in great numbers near Bayo Manchac on the Mississippi, twenty or thirty being within view at the same time. At that season a species of *Cicada*, or locust, swarmed among the woods, making a deafening noise, and I could perceive these Hawks frequently snatching them from the trees. A species of lizard, which is very numerous in that quarter of the country, and has the faculty of changing its color at will, also furnishes the Swallow-tailed Hawk with a favorite morsel. These lizards are sometimes of the most brilliant light green, in a few minutes change to a dirty clay color, and again become nearly black. The Swallow-tailed Hawk, and Mississippi Kite, feed eagerly on this lizard; and, it is said, on a small green snake also, which is the mortal enemy of the lizard, and frequently pursues it to the very extremity of the branches, where both become the prey of the Hawk.†

The Swallow-tailed Hawk retires to the south in October, at which

* *F. forficatus*, LINN. *Syst.* I., p. 89, *Sp.* II., ed. 10.—LATH. *Ind. Orn.* p. 22, No. 41.—*Milvus furcatus*, VIEILLLOT, *Ois. de l'Am. Sept.* vol. I., p. 38, pl. 10.

† This animal, if I mistake not, is the *Lacerta bullaris*, or *Bladder Lizard*, of Turton, vol. I., p. 666. The facility with which it changes color is surprising, and not generally known to naturalists.

season, Mr. Bartram informs me, they are seen in Florida, at a vast height in the air, sailing about with great steadiness; and continued to be seen thus, passing to their winter quarters, for several days. They usually feed from their claws as they fly along. Their flight is easy and graceful, with sometimes occasional sweeps among the trees, the long feathers of their tail spread out, and each extremity of it used, alternately, to lower, elevate, or otherwise direct their course. I have never yet met with their nests.

These birds are particularly attached to the extensive prairies of the western countries, where their favorite snakes, lizards, grasshoppers and locusts, are in abundance. They are sometimes, though rarely, seen in Pennsylvania and New Jersey, and that only in long and very warm summers. We are informed, that one was taken in the South Sea, off the coast which lies between Ylo and Arica, in about lat. 23° south, on the eleventh of September, by the Reverend the Father Louis Feuillée.* They are also common in Mexico, and extend their migrations as far as Peru.

The Swallow-tailed Hawk measures full two feet in length and upwards of four feet six inches in extent; the bill is black; cere yellow, covered at the base with bristles; iris of the eye silvery cream, surrounded with a blood-red ring; whole head and neck pure white, the shafts fine black hairs; the whole lower parts also pure white; the throat and breast shafted in the same manner; upper parts, or back, black, glossed with green and purple; whole lesser coverts very dark purple; wings long, reaching within two inches of the tip of the tail, and black; tail also very long, and remarkably forked, consisting of twelve feathers, all black, glossed with green and purple; several of the tertials white or edged with white, but generally covered by the scapulars; inner vanes of the secondaries white on their upper half, black towards their points; lining of the wings white; legs yellow, short and thick, and feathered before, half way below the knee; claws much curved, whitish; outer claw very small. The greater part of the plumage is white at the base; and when the scapulars are a little displaced, they appear spotted with white.

This was a male in perfect plumage. The color and markings of the male and female are nearly alike.

* Jour. des Obs. tom. II., 33.

SPECIES XII. *FALCO MISSISSIPPIENSIS*.*

MISSISSIPPI KITE.

[Plate XXV. Fig. 1, Male.]

THIS new species I first observed in the Mississippi territory, a few miles below Natchez, on the plantation of William Dunbar, Esquire, where the bird represented in the plate was obtained after being slightly wounded; and the drawing made with great care from the living specimen. To the hospitality of the gentleman above mentioned, and his amiable family, I am indebted for the opportunity afforded me of procuring this, and one or two more new species. This excellent man, (whose life has been devoted to science) though at that time confined to bed by a severe and dangerous indisposition, and personally unacquainted with me, no sooner heard of my arrival at the town of Natchez, than he sent a servant and horses, with an invitation and request to come and make his house my home and head-quarters, while engaged in exploring that part of the country. The few happy days I spent there I shall never forget.

In my perambulations, I frequently remarked this Hawk sailing about in easy circles, and at a considerable height in the air, generally in company with the Turkey-Buzzards, whose manner of flight it so exactly imitates, as to seem the same species, only in miniature, or seen at a more immense height. Why these two birds, whose food and manners, in other respects, are so different, should so frequently associate together in air, I am at a loss to comprehend. We cannot for a moment suppose them mutually deceived by the similarity of each other's flight; the keenness of their vision forbids all suspicion of this kind. They may perhaps be engaged, at such times, in mere amusement, as they are observed to soar to great heights previous to a storm; or, what is more probable, may both be in pursuit of their respective food. One that he may reconnoitre a vast extent of surface below, and trace the tainted atmosphere to his favorite carrion; the other in search of those large beetles, or coleopterous insects, that are known often to wing the higher regions of the air; and which, in the three individuals of this species

* This species, although supposed to be new by Wilson, had been figured and described by Vieillot, in his "Histoire Naturelle des Oiseaux de l'Amérique Septentrionale," under the name of *Milvus cenchrus*. Vieillot refers it to the *F. plumbeus* of Gmelin, and the *Spotted-tailed Hobby* of Latham. Gen. Syn. I., p. 106.

of Hawk which I examined by dissection, were the only substances found in their stomachs. For several miles, as I passed near Bayou Manchak, the trees were swarming with a kind of *Cicada*, or locust, that made a deafening noise; and here I observed numbers of the Hawk now before us, sweeping about among the trees like swallows, evidently in pursuit of these locusts; so that insects, it would appear, are the principal food of this species. Yet when we contemplate the beak and talons of this bird, both so sharp and powerful, it is difficult to believe that they were not intended by nature for some more formidable prey than beetles, locusts, or grasshoppers; and I doubt not but mice, lizards, snakes and small birds, furnish him with an occasional repast.

This Hawk, though wounded and precipitated from a vast height, exhibited, in his distress, symptoms of great strength, and an almost unconquerable spirit. I no sooner approached to pick him up, than he instantly gave battle, striking rapidly with his claws, wheeling round and round as he lay partly on his rump; and defending himself with great vigilance and dexterity; while his dark red eye sparkled with rage. Notwithstanding all my caution in seizing him, to carry him home, he struck his hind claw into my hand with such force as to penetrate into the bone. Anxious to preserve his life, I endeavored gently to disengage it; but this made him only contract it the more powerfully, causing such pain that I had no other alternative but that of cutting the sinew of his heel with my penknife. The whole time he lived with me, he seemed to watch every movement I made; erecting the feathers of his hind-head, and eyeing me with savage fierceness; considering me, no doubt, as the greatest savage of the two. What effect education might have had on this species, under the tutorship of some of the old European professors of Falconry, I know not; but if extent of wing, and energy of character, and ease and rapidity of flight, would have been any recommendations to royal patronage, this species possesses all these in a very eminent degree.

The long pointed wings, and forked tail, point out the affinity of this bird to that family, or subdivision of the *Falco* genus, distinguished by the name of Kites, which sail without flapping the wings, and eat from their talons as they glide along.

The Mississippi Kite measures fourteen inches in length, and thirty-six inches, or three feet, in extent. The head, neck, and exterior webs of the secondaries, are of a hoary white; the lower parts a whitish ash; bill, cere, lores, and narrow line round the eye, black; back, rump, scapulars, and wing-coverts, dark blackish ash; wings very long and pointed, the third quill the longest; the primaries are black, marked down each side of the shaft with reddish sorrel; primary coverts also slightly touched with the same; all the upper plumage at the roots is white; the scapulars are also spotted with white; but this cannot be

perceived unless the feathers be blown aside; tail slightly forked, and, as well as the rump, jet black; legs vermilion, tinged with orange and becoming blackish towards the toes; claws black; iris of the eye dark red, pupil black.

This was a male. With the female, which is expected soon from that country, I shall, in a future volume, communicate such further information relative to their manners and incubation, as I may be able to collect.

SPECIES XIII. *FALCO LAGOPUS*.*

ROUGH-LEGGED FALCON.

[Plate XXXIII. Fig. 1.]

Arct. Zool. p. 200, No. 92.—LATHAM, I., 75.

THIS handsome species, notwithstanding its formidable size and appearance, spends the chief part of the winter among our low swamps and meadows, watching for mice, frogs, lame ducks, and other inglorious game. Twenty or thirty individuals of this family have regularly taken up their winter quarters, for several years past, and probably long anterior to that date, in the meadows below this city, between the rivers Delaware and Schuylkill, where they spend their time watching along the dry banks like cats; or sailing low and slowly over the surface of the ditches. Though rendered shy from the many attempts made to shoot them, they seldom fly far, usually from one tree to another, at no great distance, making a loud squealing as they arise, something resembling the neighing of a young colt; though in a more shrill and savage tone.

The bird represented in the plate was one of this fraternity; and several others of the same association have been obtained and examined during the present winter. On comparing these with Pennant's description, referred to above, they correspond so exactly, that no doubts remain of their being the same species. Towards the beginning of April, these birds abandon this part of the country, and retire to the north to breed.

They are common during winter in the lower parts of Maryland, and numerous in the extensive meadows below Newark, New Jersey; are

* We add the following synonyms: LATH. *Ind. Orn.* p. 19.—GMEL. *Syst.* I., p. 260.—TEMM. *Man. d'Orn.* I., p. 65.

frequent along the Connecticut river; and, according to Pennant, inhabit England, Norway and Lapmark. Their flight is slow and heavy. They are often seen coursing over the surface of the meadows, long after sunset, many times in pairs. They generally roost on the tall, detached trees, that rise from these low grounds; and take their stations, at daybreak, near a ditch, bank, or hay-stack, for hours together, watching, with patient vigilance, for the first unlucky frog, mouse or lizard, to make its appearance. The instant one of these is descried, the hawk, sliding into the air, and taking a circuitous course along the surface, sweeps over the spot, and in an instant has his prey grappled and sprawling in the air.

The Rough-legged Hawk measures twenty-two inches in length, and four feet two inches in extent; cere, sides of the mouth, and feet, rich yellow; legs feathered to the toes with brownish yellow plumage, streaked with brown, femorals the same; toes comparatively short, claws and bill blue black; iris of the eye bright amber; upper part of the head pale ochre, streaked with brown; back and wings chocolate, each feather edged with bright ferruginous; first four primaries nearly black about the tips, edged externally with silvery in some lights; rest of the quills dark chocolate; lower side, and interior vanes, white; tail-coverts white; tail rounded, white, with a broad band of dark brown near the end, and tipped with white; body below, and breast, light yellow ochre, blotched and streaked with chocolate. What constitutes a characteristic mark of this bird, is a belt or girdle, of very dark brown, passing round the belly, just below the breast, and reaching under the wings to the rump; head very broad, and bill uncommonly small, suited to the humility of its prey.

The female is much darker both above and below, particularly in the belt or girdle, which is nearly black; the tail-coverts are also spotted with chocolate; she is also something larger.

SPECIES XIV. *FALCO NIGER*.*

BLACK HAWK.

[Plate LIII. Fig. 1.]

THIS, and the other two figures in the same plate, are reduced from the large drawings, which were taken of the exact size of nature, to one-half their dimensions. I regret the necessity which obliges me to contract the figures of these birds, by which much of the grandeur of the originals is lost; particular attention, however, has been paid, in the reduction, to the accurate representation of all their parts.

This is a remarkably shy and wary bird, found most frequently along the marshy shores of our large rivers; feeds on mice, frogs and moles; sails much, and sometimes at a great height; has been seen to kill a duck on wing; sits by the side of the marshes, on a stake, for an hour at a time, in an almost perpendicular position, as if dozing; flies with great ease, and occasionally with great swiftness, seldom flapping the wings; seems particularly fond of river shores, swamps and marshes; is most numerous with us in winter, and but rarely seen in summer; is remarkable for the great size of its eye, length of its wings, and shortness of its toes. The breadth of its head is likewise uncommon.

The Black Hawk is twenty-one inches long, and four feet two inches in extent; bill bluish black; cere and sides of the mouth orange yellow; feet the same; eye very large, iris bright hazel; cartilage overhanging the eye, prominent, of a dull greenish color; general color above, brown black, slightly dashed with dirty white; nape of the neck pure white *under the surface*; front white; whole lower parts black, with slight tinges of brown, and a few circular touches of the same on the femorals; legs feathered to the toes, and black, touched with brownish; the wings reach rather beyond the tip of the tail; the five first primaries are white on their inner vanes; tail rounded at the end, deep black, crossed with five narrow bands of pure white, and broadly tipped with dull white; vent black, spotted with white; inside vanes of the primaries snowy; claws black, strong and sharp; toes remarkably short.

I strongly suspect this bird to be of the very same species with the next, though both were found to be males. Although differing greatly

* As Wilson suspected, this is the *F. Sancti Johannis* of Latham. *Ind. Orn.* p. 34, No. 74.—GMEL. *Syst.* I., p. 273, No. 92. *F. Spadiceus*? *Id.* No. 91.

in plumage, yet in all their characteristic features they strikingly resemble each other. The *Chocolate-colored Falcon* of Pennant, and *St. John's Falcon* of the same author (Arct. Zool. No. 93 and 94), are doubtless varieties of this; and very probably his *Rough-legged Falcon* also. His figures, however, are bad, and ill calculated to exhibit the true form and appearance of the bird.

This species is a native of North America alone. We have no account of its ever having been seen in any part of Europe; nor have we any account of its place, or manner of breeding.

BLACK HAWK.—(VARIETY.*)

[Plate LIII. Fig. 2.]

THIS is probably a younger bird of the preceding species, being, though a male, somewhat less than its companion. Both were killed in the same meadow, at the same place and time. In form, features, and habitudes, it exactly agreed with the former.

This bird measures twenty inches in length, and in extent four feet; the eyes, bill, cere, toes, and claws, were as in the preceding; head above white, streaked with black and light brown; along the eyebrows a black line; checks streaked like the head; neck streaked with black and reddish brown, on a pale yellowish white ground; whole upper parts brown black, dashed with brownish white and pale ferruginous; tail white for half its length, ending in brown, marked with one or two bars of dusky, and a large bar of black, and tipped with dull white; wings as in the preceding, their lining variegated with black, white and ferruginous; throat and breast brownish yellow, dashed with black; belly beautifully variegated with spots of white, black and pale ferruginous; femorals and feathered legs the same, but rather darker; vent plain brownish white.

The original color of these birds, in their young state, may probably be pale brown, as the present individual seemed to be changing to a darker color on the neck and sides of the head. This change, from pale brown to black, is not greater than some of the genus are actually known to undergo. One great advantage of examining living, or newly killed specimens, is, that whatever may be the difference of color between any two, the eye, countenance, and form of the head, instantly betray the common family to which they belong; for this family like-

* As Wilson supposed, this is the young of the preceding species.

ness is never lost in the living bird, though in stuffed skins, and preserved specimens, it is frequently entirely obliterated. I have no hesitation, therefore, in giving it as my opinion, that the present and preceding birds are of the same species, differing only in age, both being males. Of the female I am unable at present to speak.

Pennant, in his account of the Chocolate-colored Hawk, which is very probably the same with the present and preceding species, observes, that it preys much on ducks, sitting on a rock, and watching their rising, when it instantly strikes them.

While traversing our seacoast and salt marshes, between Cape May and Egg Harbor, I was everywhere told of a *Duck Hawk*, noted for striking down ducks on wing, though flying with their usual rapidity. Many extravagances were mingled with these accounts, particularly, that it always struck the Duck with its breast-bone, which was universally said to project several inches, and to be strong and sharp. From the best verbal descriptions I could obtain of this Hawk, I have strong suspicions that it is no other than the *Black Hawk*, as its wings were said to be long and very pointed, the color very dark, the size nearly alike, and several other traits given that seemed particularly to belong to this species. As I have been promised specimens of this celebrated Hawk next winter, a short time will enable me to determine the matter more satisfactorily. Few gunners in that quarter are unacquainted with the *Duck Hawk*, as it often robs them of their wounded birds, before they are able to reach them.

SPECIES XVI. *FALCO HYEMALIS*.

WINTER FALCON.

[Plate XXXV. Fig. 1.]

TURTON, *Syst.* p. 156.—*Arct. Zool.* p. 209, No. 107.*

THIS elegant and spirited Hawk is represented in the plate of one-half its natural size; the other two figures are reduced in the same proportion. He visits us from the north early in November, and leaves us late in March.

This is a dexterous Frog-catcher; who, that he may pursue his profession with full effect, takes up his winter residence almost entirely among our meadows and marshes. He sometimes stuffs himself so

* We add the following synonymes: *Falco hyemalis*. GMEI. *Syst.* I., p. 274.—LATH. *Ind. Orn.* p. 35.

enormously with these reptiles, that the promineney of his craw makes a large bunch, and he appears to fly with difficulty. I have taken the broken fragments, and whole carcasses, of ten frogs, of different dimensions, from the crop of a single individual. Of his genius and other exploits I am unable to say much. He appears to be a fearless and active bird, silent, and not very shy. One which I kept for some time, and which was slightly wounded, disdained all attempts made to reconcile him to confinement; and would not suffer a person to approach, without being highly irritated; throwing himself backward, and striking with expanded talons, with great fury. Though shorter winged than some of his tribe, yet I have no doubt, but, with proper care, he might be trained to strike nobler game, in a bold style, and with great effect. But the education of Hawks in this country may well be postponed for a time, until fewer improvements remain to be made in that of the human subject.

Length of the Winter Hawk twenty inches, extent forty-one inches, or nearly three feet six inches; cere and legs yellow, the latter long, and feathered for an inch below the knee; bill bluish black, small, furnished with a tooth in the upper mandible; eye bright amber, cartilage over the eye very prominent, and of a dull green; head, sides of the neck, and throat, dark brown, streaked with white; lesser coverts with a strong glow of ferruginous; secondaries pale brown, indistinctly barred with darker; primaries brownish orange, spotted with black, wholly black at the tips; tail long, slightly rounded, barred alternately with dark and pale brown, inner vanes white, exterior feathers brownish orange; wings, when closed, reach rather beyond the middle of the tail; tail-coverts white, marked with heart-shaped spots of brown; breast and belly white, with numerous long drops of brown, the shafts blackish; femoral feathers large, pale yellow ochre, marked with numerous minute streaks of pale brown; claws black. The legs of this bird are represented by different authors as slender; but I saw no appearance of this in those I examined.

The female is considerably darker above, and about two inches longer.

*FALCO LINEATUS.**

RED-SHOULDERED HAWK.

[Plate LIII. Fig. 3.]

Arct. Zool. p. 206, No. 192.—*LATH.* I., 56, No. 36.—*TURT. Syst.* p. 153.

THIS Hawk is more rarely met with than either of those in the same plate. Its haunts are in the neighborhood of the sea. It preys on Larks, Sandpipers, and the small Ringed Plover, and frequently on Ducks. It flies high and irregularly, and not in the sailing manner of the Long-winged Hawks. I have occasionally observed this bird near Egg Harbor, in New Jersey; and once in the meadows below this city. This Hawk was first transmitted to Great Britain by Mr. Blackburne, from Long Island, in the state of New York. Of its manner of building, eggs, &c., we are altogether unacquainted.

The Red-shouldered Hawk is nineteen inches in length; the head and back are brown, seamed and edged with rusty; bill blue black; cere and legs yellow; greater wing-coverts and secondaries pale olive brown, thickly spotted on both vanes with white and pale rusty; primaries very dark, nearly black, and barred or spotted with white; tail rounded, reaching about an inch and a half beyond the wings, black, crossed by five bands of white, and broadly tipped with the same; whole breast and belly bright rusty, speckled and spotted with transverse rows of white, the shafts black; chin and cheeks pale brownish, streaked also with black; iris reddish hazel; vent pale ochre, tipped with rusty; legs feathered a little below the knees, long; these and the feet a fine yellow; claws black; femorals pale rusty, faintly barred with a darker tint.

In the month of April I shot a female of this species, and the only one I have yet met with, in a swamp, seven or eight miles below Philadelphia. The eggs were, some of them, nearly as large as peas, from which circumstance I think it probable they breed in such solitary parts, even in this state. In color, size and markings, it differed very little from the male described above. The tail was scarcely quite so black, and the white bars not so pure; it was also something larger.

*This is stated by Prince Musignano to be the young male of the preceding species.

SPECIES XVI. *FALCO ULIGINOSUS*.*

MARSH HAWK.

[Plate LI. Fig. 1.]

EDW. IV., 291.—LATH. I., 90.—*Arct. Zool.* p. 208, No. 105.—BARTRAM, p. 290.

A DRAWING of this Hawk was transmitted to Edwards more than fifty years ago, by Mr. William Bartram, and engraved in Plate 291 of Edwards' Natural History. At that time, and I believe till now, it has been considered as a species peculiar to this country.

I have examined various individuals of this Hawk, both in summer and in the depth of winter, and find them to correspond so nearly with the Ring-tail of Europe, that I have no doubt of their being the same species.†

This Hawk is most numerous where there are extensive meadows and salt marshes, over which it sails very low, making frequent circuitous sweeps over the same ground, in search of a species of mouse, figured in Plate L., and very abundant in such situations. It occasionally flaps the wings, but is most commonly seen sailing about within a few feet of the surface. They are usually known by the name of the Mouse Hawk along the coast of New Jersey, where they are very common. Several were also brought me last winter from the meadows below Philadelphia. Having never seen its nest, I am unable to describe it from my own observation. It is said, by European writers, to build on the ground, or on low limbs of trees. Pennant observes, that it sometimes changes to a rust-colored variety, except on the rump and tail. It is found, as was to be expected, at Hudson's Bay, being native in both this latitude and that of Britain. We are also informed that it is common in the open and temperate parts of Russia and Siberia; and extends as far as Lake Baikal, though it is said not to be found in the north of Europe.‡

The Marsh Hawk is twenty-one inches long, and three feet eleven inches extent; cere and legs yellow, the former tinged with green, the latter

* *Falco pygargus*, LINN.

† This opinion of Wilson's is in accordance with that of some recent ornithologists. We add the following synonyms: *F. cyaneus*, GMEL. *Syst.* I., p. 226.—LATH. *Ind. Orn.* p. 39.—*Ring-tail*, PENN. *Brit. Zool.* I., p. 194, No. 59.—*Hen-Harrier*, Id. p. 193, No. 58.—*F. pygargus*, LINN. *Syst.* I., p. 89, No. 9, ed. 10.—*Circus Hudsonius*, VIEILL. *Ois de l'Am. Sept.* I., p. 36, pl. 9.—*Buzard Saint-Martin*, TEMM. *Man. d'Orn.* I., p. 72.

‡ Palls, as quoted by Pennant.

long and slender; nostril large, triangular, this, and the base of the bill, thickly covered with strong curving hairs, that rise from the space between the eye and bill, arching over the base of the bill and cere—this is a particular characteristic; bill blue, black at the end; eye dark hazel; cartilage overhanging the eye, and also the eyelid, bluish green; spot under the eye, and line from the front over it, brownish white; head above, and back, dark glossy chocolate brown, the former slightly seamed with bright ferruginous; scapulars spotted with the same *under the surface*; lesser coverts, and band of the wing, here and there edged with the same; greater coverts and primaries tipped with whitish; quills deep brown at the extreme half, some of the outer ones hoary on the exterior edge; all the primaries yellowish white on the inner vanes and upper half, also barred on the inner vanes with black; tail long, extending three inches beyond the wings, rounded at the end, and of a pale sorrel color, crossed by four broad bars of very dark brown, the two middle feathers excepted, which are barred with deep and lighter shades of chocolate brown; chin pale ferruginous; round the neck a collar of bright rust color; breast, belly and vent, pale rust, shafted with brown; femorals long, tapering, and of the same pale rust tint; legs feathered near an inch below the knee. This was a female. The male differs chiefly in being rather lighter, and somewhat less.

This Hawk is particularly serviceable to the rice fields of the southern states, by the havoc it makes among the clouds of Rice Buntings, that spread such devastation among that grain, in its early stage. As it sails low and swiftly, over the surface of the field, it keeps the flocks in perpetual fluctuation, and greatly interrupts their depredations. The planters consider one Marsh Hawk to be equal to several negroes, for alarming the Rice-birds. Formerly the Marsh Hawk used to be numerous along the Schuylkill and Delaware, during the time the seeds of the *Zizania* were ripening, and the Reed-birds abundant; but they have of late years become less numerous here.

Pennant considers the "*strong, thick, and short legs*" of this species as specific distinctions from the Ring-tailed Hawk; the legs, however, are *long and slender*; and a Marsh Hawk such as he has described, with strong, thick and short legs, is nowhere to be found in the United States.

Note.—Montagu, in the "Supplement to the Ornithological Dictionary," an excellent work, positively asserts, that the *F. cyaneus*, and the *F. pygargus*, are the same species. This opinion the same writer had given in a paper, published in the ninth volume of the Linnean Transactions. If this be the fact, the name of *pygargus* must be retained for the species, it being that which was given to it by Linnæus, in the tenth edition of the *Systema Naturæ*, published in the year 1758.—*G. Ord.*

GENUS III. STRIX. OWL.

SPECIES I. *STRIX NYCTEA*.

SNOW OWL.

[Plate XXXII. Fig. 1—Male.]

LATHAM I., 132, No. 17.—BUFFON I., 387.—*Great White Owl*, EDW. 61.—*Snowy Owl*, *Arct. Zool.* 233, No. 121.*

THE Snow Owl represented in the plate, is reduced to half its natural size. To preserve the apparent magnitude, the other accompanying figures are drawn by the same scale.

This great northern hunter inhabits the coldest and most dreary regions of the northern hemisphere, in both continents. The forlorn mountains of Greenland, covered with eternal ice and snows, where, for nearly half the year, the silence of death and desolation might almost be expected to reign, furnish food and shelter to this hardy adventurer; whence he is only driven by the extreme severity of weather towards the seashore. He is found in Lapland, Norway, and the country near Hudson's Bay, during the whole year; is said to be common in Siberia, and numerous in Kamtschatka. He is often seen in Canada, and the northern districts of the United States; and sometimes extends his visits to the borders of Florida. Nature, ever provident, has so effectually secured this bird from the attacks of cold, that not even a point is left exposed. The bill is almost completely hid among a mass of feathers, that cover the face; the legs are clothed with such an exuberance of long thick hair-like plumage, as to appear nearly as large as those of a middle sized dog, nothing being visible but the claws, which are large, black, much hooked, and extremely sharp. The whole plumage, below the surface, is of the most exquisitely soft, warm, and elastic kind; and so closely matted together, as to make it a difficult matter to penetrate to the skin.

The usual food of this species is said to be hares, grouse, rabbits, ducks, mice, and even carrion. Unlike most of his tribe, he hunts by day as well as by twilight, and is particularly fond of frequenting the shores and banks of shallow rivers, over the surface of which he slowly sails, or sits on a rock, a little raised above the water, watching for fish.

* We add the following synonyms: *Strix nyctea*, LINN. *Syst.* ed. 10, I., p. 93.—GMEL. *Syst.* I., p. 291.—LATH. *Ind. Orn.* p. 57.—*Strix candida*, Id. Sup. 2, p. 14.—VIEILL. *Ois. de l'Am. Sept.* I., pl. 18.—TEMM. *Man. d'Orn.* I., p. 82.

These he seizes with a sudden and instantaneous stroke of the foot, seldom missing his aim. In the more southern and thickly settled parts he is seldom seen; and when he appears, his size, color, and singular aspect, attract general notice.

In the month of October I met with this bird on Oswego river, New York, a little below the falls, vigilantly watching for fish. At Pittsburgh, in the month of February, I saw another, which had been shot in the wing some time before. At a place on the Ohio called Long Reach, I examined another, which was the first ever recollected to have been seen there. In the town of Cincinnati, state of Ohio, two of these birds alighted upon the roof of the court-house, and alarmed the whole town. A people more disposed to superstition, would have deduced some dire or fortunate prognostication, from their selecting such a place; but the only solicitude was how to get possession of them, which after several volleys was at length effected. One of these, a female, I afterwards examined, when on my way through that place to New Orleans. Near Bairdstown, in Kentucky, I met with a large and very beautiful one, which appeared to be altogether unknown to the inhabitants of that quarter, and excited general surprise. A person living on the eastern shore of Maryland, shot one of these birds a few months ago, a female, and, having stuffed the skin, brought it to Philadelphia, to Mr. Peale, in expectation no doubt of a great reward. I have examined eleven of these birds within these fifteen months last past, in different and very distant parts of the country, all of which were shot either during winter, late in the fall, or early in spring; so that it does not appear certain whether any remain during summer within the territory of the United States; though I think it highly probable that a few do, in some of the more northern inland parts, where they are most numerous during winter.

The color of this bird is well suited for concealment, while roaming over the general waste of snows; and its flight strong and swift, very similar to that of some of our large Hawks. Its hearing must be exquisite, if we judge from the largeness of these organs in it; and its voice is so dismal, that, as Pennant observes, it adds horror even to the regions of Greenland by its hideous cries, resembling those of a man in deep distress.

The male of this species measures twenty-two inches and a half in length, and four feet six inches in breadth; head and neck nearly white, with a few small dots of dull brown interspersed; eyes deep sunk under projecting eyebrows, the plumage at their internal angles fluted or pressed in, to admit direct vision, below this it bristles up, covering nearly the whole bill; the irides are of the most brilliant golden yellow, and the countenance, from the proportionate smallness of the head, projection of the eyebrow, and concavity of the plumage at the angle of

the eye, very different from that of any other of the genus; general color of the body white, marked with lunated spots of pale brown above, and with semicircular dashes below; femoral feathers long, and legs covered, even over the claws, with long shaggy hair-like down, of a dirty white; the claws, when exposed, appear large, much hooked, of a black color, and extremely sharp pointed; back white, tail rounded at the end, white, slightly dotted with pale brown near the tips; wings, when closed, reach near the extremity of the tail; vent feathers large, strong shafted, and extending also to the point of the tail; upper part of the breast and belly plain white; body very broad and flat.

The female, which measures two feet in length, and five feet two inches in extent, is covered more thickly with spots of a much darker color than those on the male; the chin, throat, face, belly and vent, are white; femoral feathers white, long and shaggy, marked with a few heart-shaped spots of brown; legs also covered to the claws with long white hairy down; rest of the plumage white, every feather spotted or barred with dark brown, largest on the wing quills, where they are about two inches apart; fore part of the crown thickly marked with roundish black spots; tail crossed with bands of broad brownish spots; shafts of all the plumage white; bill and claws, as in the male, black; third and fourth wing quill the longest, span of the foot four inches.

From the various individuals of these birds which I have examined, I have reason to believe that the male alone approaches nearly to white in his plumage, the female rarely or never. The bird from which the figure in the plate was drawn, was killed at Egg Harbor, New Jersey, in the month of December. The conformation of the eye of this bird forms a curious and interesting subject to the young anatomist. The globe of the eye is immovably fixed in its socket, by a strong, elastic, hard, cartilaginous case, in form of a truncated cone; this case being closely covered with a skin, appears at first to be of one continued piece; but on removing the exterior membrane it is found to be formed of fifteen pieces, placed like the staves of a cask, overlapping a little at the base or narrow end, and seem as if capable of being enlarged or contracted, perhaps by the muscular membrane with which they are encased. In five other different species of Owls, which I have since examined, I found nearly the same conformation of this organ, and exactly the same number of staves. The eye being thus fixed, these birds, as they view different objects, are always obliged to turn the head; and nature has so excellently adapted their neck to this purpose, that they can, with ease, turn it round, without moving the body, in almost a complete circle.

SPECIES III. *STRIX HUDSONIA*.*

H A W K O W L.

[Plate L. Fig. 6.]

Little Hawk Owl, EDW. 62.—LATH. I., 142, No. 29.—*Phil. Trans.* 61. 385—*Le Chat-huant de Canada*, BRISS. I., 518.—RUFF. I., 391.—*Chouette à longue queue de Sibirie*, Pl. enl. 463.—*Arct. Zool.* p. 234, No. 123.

THIS is another inhabitant of both continents, a kind of equivocal species, or rather a connecting link between the Hawk and Owl tribes, resembling the latter in the feet, and in the radiating feathers round the eye and bill; but approaching nearer to the former in the smallness of its head, narrowness of its face, and in its length of tail. In short, it seems just such a figure as one would expect to see generated between a Hawk and an Owl of the same size, were it possible for them to produce; and yet it is as distinct, independent, and original a species, as any other. The figure in the plate is reduced to one-half the size of life. It has also another strong trait of the Hawk tribe, in flying and preying by day, contrary to the general habit of Owls. It is characterized as a bold and active species, following the fowler, and carrying off his game as soon as it is shot. It is said to prey on Partridges and other birds; and is very common at Hudson's Bay; where it is called by the Indians *Coparacoch*.† We are also informed that this same species inhabits Denmark and Sweden, is frequent in all Siberia, and on the west side of the Uralian chain, as far as Casan and the Volga; but not in Russia.‡ It was also seen by the navigators near Sandwich sound, in lat. 61° north.

This species is very rare in Pennsylvania, and the more southern parts of the United States. Its favorite range seems to be along the borders of the arctic regions, making occasional excursions southwardly, when compelled by severity of weather, and consequent scarcity of food. I some time ago received a drawing of this bird from the district of Maine, where it was considered rare; that, and the specimen from which the drawing in the plate was taken, which was shot in the neighborhood of Philadelphia, are the only two that have come under my notice. These having luckily happened to be male and female, have enabled me to give a description of both. Of their nest, or manner of breeding, we have no account.

* *Strix funerea*, LINN., which name must be adopted.

† Edwards.

‡ Pennant.

The male of this species is fifteen inches long; the bill orange yellow, and almost hid among the feathers; plumage of the chin curving up over the under mandible; eyes bright orange; head small; face narrow, and with very little concavity; cheeks white; crown and hind-head dusky black, thickly marked with round spots of white; sides of the neck marked with a large curving streak of brown black, with another a little behind it of a triangular form; back, scapulars, rump and tail-coverts, brown olive, thickly speckled with broad spots of white; the tail extends three inches beyond the tips of the wings, is of a brown olive color, and crossed with six or seven narrow bars of white, rounded at the end, and also tipped with white; the breast and chin are marked with a large spot of brown olive; upper part of the breast light, lower, and all the parts below, elegantly barred with dark brown and white; legs and feet covered to, and beyond the claws, with long whitish plumage, slightly yellow, and barred with fine lines of olive; claws horn color. The weight of this bird was twelve ounces.

The female is much darker above; the quills are nearly black, and the upper part of the breast is blotched with deep blackish brown.

It is worthy of remark, that in all Owls that fly by night, the exterior edges and sides of the wing quills are slightly recurved, and end in fine hairs or points; by which means the bird is enabled to pass through the air with the greatest silence, a provision necessary for enabling them the better to surprise their prey. In the Hawk Owl now before us, which flies by day, and to whom this contrivance would be of no consequence, it is accordingly omitted, or at least is scarcely observable. So judicious, so wise and perfectly applicable, are all the dispositions of the Creator.

SPECIES III. *STRIX NEBULOSA*.

BARRED OWL.

[Plate XXXIII. Fig. 2.]

TURTON, *Syst.* 169.—*Arct. Zool.* p. 234, No. 122.—LATH. 133.—*Strix acclamator*, the Whooping Owl, BARTRAM, 289.*

THIS is one of our most common Owls. In winter, particularly, it is numerous in the lower parts of Pennsylvania, among the woods that border the extensive meadows of Schuylkill and Delaware. It is very frequently observed flying during day, and certainly sees more distinctly, at that time, than many of its genus. In one spring, at different times, I met with more than forty of them, generally flying, or sitting exposed. I also once met with one of their nests, containing three young, in the crotch of a white oak, among thick foliage. The nest was rudely put together, composed outwardly of sticks, intermixed with some dry grass, and leaves, and lined with smaller twigs. At another time, in passing through the woods, I perceived something white, on the high shaded branch of a tree, close to the trunk, that, as I thought, looked like a cat asleep. Unable to satisfy myself, I was induced to fire, when, to my surprise and regret, four young Owls, of this same species, nearly full grown, came down headlong, and fluttering for a few moments, died at my feet. Their nest was probably not far distant. I have also seen the eggs of this species, which are nearly as large as those of a young pullet, but much more globular, and perfectly white.

These birds sometimes seize on fowls, partridges, and young rabbits; mice, and small game, are, however, their most usual food. The difference of size between the male and female of this Owl is extraordinary, amounting, sometimes, to nearly eight inches in the length. Both scream during the day like a Hawk.

The male Barred Owl measures sixteen inches and a half in length, and thirty-eight inches in extent; upper parts a pale brown, marked with transverse spots of white; wings barred with alternate bands of pale brown and darker; head smooth, very large, mottled with transverse touches of dark brown, pale brown and white; eyes large, deep blue, the pupil not perceivable; face, or radiated circle of the eyes, gray, surrounded by an outline of brown and white dots; bill yellow,

* We add the following synonymes: *Strix nebulosa*, LATH. *Ind. Orn.* p. 58.—GMEL. *Syst.* I., p. 291.—TEMM. *Man. d'Orn.* I., p. 88.

tinged with green; breast barred transversely with rows of brown and white; belly streaked longitudinally with long stripes of brown, on a yellowish ground; vent plain yellowish white; thighs and feathered legs the same, slightly pointed with brown; toes nearly covered with plumage; claws dark horn color, very sharp; tail rounded, and remarkably concave below, barred with six broad bars of brown, and as many narrow ones of white; the back and shoulders have a cast of chestnut; at each internal angle of the eye is a broad spot of black; the plumage of the radiated circle round the eye ends in long black hairs; and the bill is encompassed by others of a longer and more bristly kind. These, probably, serve to guard the eye when any danger approaches it, in sweeping hastily through the woods; and those usually found on Flycatchers, may have the same intention to fulfil; for on the slightest touch of the point of any of these hairs, the nictitating membrane was instantly thrown over the eye.

The female is twenty-two inches long, and four feet in extent; the chief difference of color consists in her wings being broadly spotted with white; the shoulder being a plain chocolate brown; the tail extends considerably beyond the tips of the wings; the bill is much larger, and of a more golden yellow; iris of the eye the same as that of the male.

The different character of the feathers of this, and I believe of most Owls, is really surprising. Those that surround the bill, differ little from bristles; those that surround the region of the eyes, are exceeding open, and unwebbed; these are bounded by another set, generally proceeding from the external edge of the ear, of a most peculiar, small, narrow, velvety kind, whose fibres are so exquisitely fine, as to be invisible to the naked eye; above, the plumage has one general character at the surface, calculated to repel rain and moisture; but towards the roots, it is of the most soft, loose, and downy substance, in nature, so much so, that it may be touched without being felt; the webs of the wing quills are also of a delicate softness, covered with an almost imperceptible hair, and edged with a loose silky down, so that the owner passes through the air without interrupting the most profound silence. Who cannot perceive the hand of God in all these things!

SPECIES IV. *STRIX FLAMMEA*.
WHITE, OR BARN OWL.

[Plate L. Fig. 2.]

LATH. I., 138.—*Arct. Zool.* p. 235, No. 124.—*Phil. Trans.* III., 138.—*L'Effraie, ou la Fresaie*, BUFF. I., 366, pl. 26, Pl. enl. 440.—BEWICK'S *British Birds*, I., p. 89.—*Common Owl*, TURT. *Syst.* p. 170.

THIS Owl, though so common in Europe, is rare in this part of the United States; and is only found here during very severe winters. This may possibly be owing to the want of those favorite recesses, which it so much affects in the eastern continent. The multitudes of old ruined castles, towers, monasteries and cathedrals, that everywhere rise to view in those countries, are the chosen haunts of this well known species. Its savage cries at night give, with vulgar minds, a cast of supernatural horror to those venerable mouldering piles of antiquity. This species, being common to both continents, doubtless extends to the arctic regions. It also inhabits Tartary, where, according to Pennant, "the Mongols and natives almost pay it divine honors, because they attribute to this species the preservation of the founder of their empire, Cinghis Khan. That prince, with his small army, happened to be surprised and put to flight by his enemies, and forced to conceal himself in a little coppice: an Owl settled on the bush under which he was hid, and induced his pursuers not to search there, as they thought it impossible that any man could be concealed in a place where that bird would perch. From thenceforth they held it to be sacred, and every one wore a plume of the feathers of this species on his head. To this day the Kalmucs continue the custom on all great festivals; and some tribes have an idol in form of an Owl, to which they fasten the real legs of one."*

This species is rarely found in Pennsylvania in summer. Of its place and manner of building I am unable, from my own observation, to speak. The bird itself has been several times found in the hollow of a tree, and was once caught in a barn in my neighborhood. European writers inform us, that it makes no nest; but deposits its eggs in the holes of walls, and lays five or six of a whitish color; is said to feed on mice and small birds, which, like the most of its tribe, it swallows whole, and afterwards emits the bones, feathers, and other indigestible parts, at its

* *Arct. Zool.* p. 235.

mouth, in the form of small round cakes, which are often found in the empty buildings it frequents. During its repose it is said to make a blowing noise, resembling the snoring of a man.*

It is distinguished in England by various names, the Barn Owl, the Church Owl, Gillihowlet and Screech Owl. In the lowlands of Scotland it is universally called the Hoolet.

The White or Barn Owl is fourteen inches long, and upwards of three feet six inches in extent; bill a whitish horn color, longer than is usual among its tribe; space surrounding each eye remarkably concave, the radiating feathers meeting in a high projecting ridge, arching from the bill upwards; between these lies a thick tuft of bright tawny feathers, that are scarcely seen unless the ridges be separated; face white, surrounded by a border of narrow, thickset, velvety feathers, of a reddish cream color at the tip, pure silvery white below, and finely shafted with black; whole upper parts a bright tawny yellow, thickly sprinkled with whitish and pale purple, and beautifully interspersed with larger drops of white, each feather of the back and wing-coverts ending in an oblong spot of white, bounded by black; head large, tumid; sides of the neck pale yellow ochre, thinly sprinkled with small touches of dusky; primaries and secondaries the same, thinly barred and thickly sprinkled with dull purplish brown; tail two inches shorter than the tips of the wings, even, or very slightly forked, pale yellowish, crossed with five bars of brown, and thickly dotted with the same; whole lower parts pure white, thinly interspersed with small round spots of blackish; thighs the same, legs long, thinly covered with short white down, nearly to the feet, which are of a dirty white, and thickly warted; toes thinly clad with white hairs; legs and feet large and clumsy. The ridge or shoulder of the wing is tinged with bright orange brown. The aged bird is more white; in some, the spots of black on the breast are wanting, and the color below a pale yellow; in others a pure white.

The female measures fifteen inches and a half in length, and three feet eight inches in extent; is much darker above; the lower parts tinged with tawny, and marked also with round spots of black. One of these was lately sent me, which was shot on the border of the meadows below Philadelphia. Its stomach contained the mangled carcasses of four large meadow mice, hair, bones and all. The common practice of most Owls is, after breaking the bones, to swallow the mouse entire; the bones, hair, and other indigestible parts, are afterwards discharged from the mouth, in large roundish dry balls, that are frequently met with in such places as these birds usually haunt.

As the *Meadow-mouse* is so eagerly sought after by those birds, and also by great numbers of Hawks, which regularly, at the commencement

* Bewick, I., p. 90.

of winter, resort to the meadows below Philadelphia, and to the marshes along the seashore, for the purpose of feeding on these little animals, some account of them may not be improper in this place. Fig. 3 represents the Meadow-mouse drawn by the same scale, viz. reduced to one-half its natural dimensions. This species appears not to have been taken notice of by Turton, in his translation of Gmelin's Linnæus. From the nose to the insertion of the tail it measures four inches; the tail is between three-quarters and an inch long, hairy, and usually curves upwards; the fore feet are short, five-toed, the inner toe very short, but furnished with a claw; hind feet also five-toed; the ears are shorter than the fur, through which, though large, they are scarcely noticeable; the nose is blunt; the color of the back is dark brown, that of the belly hoary; the fur is long and extremely fine; the hind feet are placed very far back, and are also short; the eyes exceeding small. This mischievous creature is a great pest to the meadows, burrowing in them in every direction; but is particularly injurious to the embankments raised along the river, perforating them in numerous directions, and admitting the water, which afterwards increases to dangerous breaches, inundating large extents of these low grounds, and thus becoming the instruments of their own destruction. In their general figure they bear great resemblance to the common musk-rat, and, like them, swim and dive well. They feed on the bulbous roots of plants, and also on garlic, of which they are remarkably fond.*

Another favorite prey of most of our Owls is the bat, one species of which is represented at fig. 4, as it hung during the day in the woods where I found it. This also appears to be a nondescript. The length of this bat, from the nose to the tip of the tail, is four inches; the tail itself is as long as the body, but generally curls up inwards; the general

* As Wilson conjectured, this animal was a nondescript. It being a *Campagnol*, it may be classed under the name of *Arvicola Pennsylvanicus*; as it is the same animal which was introduced into my catalogue of Mammalia, under that trivial denomination. As far as our information extends, the female brings forth only *two* young at a litter. Her two teats are inguinal; and the young, by holding on to them, are transported by the mother whithersoever she goes—that is, when they are inclined to accompany her; when dragged along, their position is between her hind legs; and she can run with them hanging to her, as stated, with considerable swiftness.

Dr. Leach, in the Zoological Miscellany, vol. i., p. 60, figured and described a *Campagnol*, which had been received from Hudson's Bay. This animal, which was named *A. zanthognatha*, has been mistaken, by some naturalists, for the present species, which is not half its size: the Fulvous-cheeked Campagnol measures, from the tip of its nose to the base of its tail, at least *nine* inches, whilst the admeasure-ment of ours is not more than four inches. Dr. Leach's description is too imperfect: it lacks those details which are essential in discriminating species. The size of his animal we infer from his figure, which he says is "rather less than half of the natural size."—*G. Ord.*

color is a bright iron gray, the fur being of a reddish cream at bottom, then strongly tinged with lake, and minutely tipped with white; the ears are scarcely half an inch long, with two slight valves; the nostrils are somewhat tubular; fore teeth in the upper jaw, none—in the lower, four, not reckoning the tusks; the eyes are very small black points; the chin, upper part of the breast and head, are of a plain reddish cream color; the wings have a single hook or claw each, and are so constructed, that the animal may hang either with its head or tail downward. I have several times found two hanging fast locked together behind a leaf, the hook of one fixed in the mouth of the other; the hind feet are furnished with five toes, sharp-clawed; the membrane of the wings is dusky, shafts light brown; extent twelve inches. In a cave, not far from Carlisle in Pennsylvania, I found a number of these bats in the depth of winter, in very severe weather; they were lying on the projecting shelves of the rocks, and when the brand of fire was held near them, wrinkled up their mouths, showing their teeth; when held in the hand for a short time, they became active, and after being carried into a stove room, flew about as lively as ever.*

SPECIES V. *STRIX PASSERINA*.

LITTLE OWL.

[Plate XXXIV. Fig. 1.]

Arct. Zool. 236, No. 126.—TURTON, *Syst.* 172.†

THIS is one of the least of its whole genus, but like many other little folks, makes up in neatness of general form and appearance, for deficiency of size, and is perhaps the most shapely of all our Owls. Nor are the colors and markings of its plumage inferior in simplicity and effect to most others. It also possesses an eye fully equal in spirit and brilliancy to the best of them.

This species is a general and constant inhabitant of the middle and northern states; but is found most numerous in the neighborhood of the seashore, and among woods and swamps of pine trees. It rarely rambles much during day; but if disturbed, flies a short way, and again

* This species Dr. Goodman calls the *Vespertilio noveboracensis* of Linnæus. See his *American Natural History*, vol. I., p. 48. Wilson, it should seem, was of a different opinion.

† We add the following synonymes: *Strix passerina*, LINN. *Syst.* ed. 10, vol. I., p. 93. GMEL. *Syst.* I., p. 296. No. 12.—*Strix acadiensis*, LATH. *Ind. Orn.* p. 65.—*S. acadica*, GMEL. *Syst.* I., p. 296, No. 43.—TEMN. *Man. d'Orn.* I., p. 92.

takes shelter from the light; at the approach of twilight it is all life and activity; being a noted and dexterous mouse-catcher. It is found as far north as Nova Scotia, and even Hudson's Bay; is frequent in Russia; builds its nest generally in pines, half way up the tree, and lays two eggs, which, like those of the rest of its genus, are white. The melancholy and gloomy umbrage of those solitary evergreens forms its favorite haunts; where it sits dozing and slumbering all day, lulled by the roar of the neighboring ocean.

The Little Owl is seven inches and a half long, and eighteen inches in extent; the upper parts are a plain brown olive, the scapulars, and some of the greater and lesser coverts, being spotted with white; the first five primaries are crossed obliquely with five bars of white; tail rounded, rather darker than the body, crossed with two rows of white spots, and tipped with white; whole interior vanes of the wings spotted with the same; auriculars yellowish brown; crown, upper part of the neck, and circle surrounding the ears, beautifully marked with numerous points of white, on an olive brown ground; front pure white, ending in long blackish hairs; at the internal angle of the eyes, a broad spot of black, radiating outwards; irides pale yellow; bill a blackish horn color, lower parts streaked with yellow ochre and reddish bay; thighs and feathered legs pale buff; toes covered to the claws, which are black, large, and sharp pointed.

The bird from which the foregoing figure and description were taken, was shot on the seashore, near Great Egg Harbor, in New Jersey, in the month of November; and on dissection was found to be a female. Turton describes a species called the White-fronted Owl (*S. albifrons*), which in every thing, except in size, agrees with this bird, and has very probably been taken from a young male; which is sometimes found considerably less than the female.

SPECIES VI. *STRIX BRACHYOTOS.*

SHORT-EARED OWL.

[Plate XXXIII. Fig. 3.]

TURTON, *Syst.* p. 167.—*Arct. Zool.* p. 229, No. 116.—LATH. I., 124.—*La Chouette, ou la grand Chevêche*, BUFF. I., *Pl. enl.* 438.*

THIS is another species common to both continents, being found in Britain as far north as the Orkney isles, where it also breeds; building its nest upon the ground, amidst the heath; arrives and disappears in the south parts of England with the Woodcock, that is in October and April; consequently does not breed there. It is called at Hudson's Bay the Mouse Hawk; and is described as not flying like other Owls in search of prey; but sitting quiet on a stump of a tree, watching for mice. It is said to be found in plenty in the woods near Chatteau bay, on the coast of Labrador. In the United States it is also a bird of passage, coming to us from the north in November, and departing in April. The bird represented in the plate was shot in New Jersey, a few miles below Philadelphia, in a thicket of pines. It has the stern aspect of a keen, vigorous, and active bird; and is reputed to be an excellent mouser. It flies frequently by day, particularly in dark cloudy weather, takes short flights, and, when sitting and looking sharply around, erects the two slight feathers that constitute its horns, which are at such times very noticeable; but otherwise not perceivable. No person, on slightly examining this bird after being shot, would suspect it to be furnished with horns; nor are they discovered but by careful search, or previous observation on the living bird. Bewick, in his History of British Birds, remarks, that this species is sometimes seen in companies; twenty-eight of them being once counted in a turnip field in November.

Length fifteen inches, extent three feet four inches; general color above dark brown, the feathers broadly skirted with pale yellowish brown; bill large, black; irides rich golden yellow, placed in a bed of deep black, which radiates outwards all around, except towards the bill, where the plumage is whitish; ears bordered with a semicircular line of black and tawny yellow dots; tail rounded, longer than usual with Owls, crossed with five bands of dark brown, and as many of yellow

* We add the following synonyms: *Strix brachyotos*, LATH. *Ind. Orn.* p. 55.—*Strix Ulula*, LINN. *Syst.* ed. 10, p. 93.—TEMM. *Man. d'Orn.* I., p. 99.

ochre, some of the latter have central spots of dark brown, the whole tipped with white; quills also banded with dark brown and yellow ochre; breast and belly streaked with dark brown, on a ground of yellowish; legs, thighs and vent, plain dull yellow; tips of the three first quill feathers black; legs clothed to the claws, which are black, curved to about the quarter of a circle, and exceedingly sharp.

The female I have never seen; but she is said to be somewhat larger and much darker; and the spots on the breast larger and more numerous.

SPECIES VIII. *STRIX VIRGINIANA*.

GREAT HORNED OWL.

[Plate L. Fig. 1.]

Arct. Zool. p. 228, No. 114.—EDW. 60.—LATH. I., 119.—TURT. *Syst.* p. 166.*

THE figure of this bird, as well as of those represented in the same plate, is reduced to one-half its natural dimensions. By the same scale, the greater part of the Hawks and Owls of the present volume† are drawn; their real magnitude rendering this unavoidable.

This noted and formidable Owl is found in almost every quarter of the United States. His favorite residence, however, is in the dark solitudes of deep swamps, covered with a growth of gigantic timber; and here, as soon as evening draws on, and mankind retire to rest, he sends forth such sounds, as seem scarcely to belong to this world, startling the solitary pilgrim as he slumbers by his forest fire,

“Making night hideous.”

Along the mountainous shores of the Ohio, and amidst the deep forests of Indiana, alone, and reposing in the woods, this ghostly watchman frequently warned me of the approach of morning, and amused me with his singular exclamations; sometimes sweeping down and around my fire, uttering a loud and sudden *Waugh O! Waugh O!* sufficient to have alarmed a whole garrison. He has other nocturnal solos, no less melodious, one of which very strikingly resembles the half-suppressed screams of a person suffocating, or throttled, and cannot fail of being

* We add the following synonyms: *Hibou des Terres Magellaniques*, BUFF. *Pl. Enl.* 385.—*Bubo Virginianus*, BRISS. I., p. 484.—*Strix Virginiana*, IND. *Orn.* p. 52.—GMEI. *Syst.* I., p. 287.—*Virginian Eared Owl*, LATH. *Gen. Syn. Supl.* VI., p. 40.

† Volume VI. of the original edition.

exceedingly entertaining to a lonely, benighted traveller, in the midst of an Indian wilderness.

This species inhabits the country round Hudson's Bay; and, according to Pennant, who considers it a mere variety of the Eagle Owl (*Strix bubo*) of Europe, is found in Kamtschatka; extends even to the Arctic regions, where it is often found white; and occurs as low as Astrakan. It has also been seen white in the United States; but this has doubtless been owing to disease or natural defect, and not to climate. It preys on young rabbits, squirrels, rats, mice, partridges, and small birds of various kinds. It has been often known to prowl about the farm-house, and carry off chickens from the roost. A very large one, wing-broken while on a foraging excursion of this kind, was kept about a house for several days, and at length disappeared, no one knew how. Almost every day after this, hens and chickens also disappeared, one by one, in an unaccountable manner, till in eight or ten days very few were left remaining. The fox, the minx and weasel, were alternately the reputed authors of this mischief, until one morning, an old lady, rising before day to bake, in passing towards the oven, surprised her late prisoner the Owl, regaling himself on the body of a newly killed hen. The thief instantly made for his hole under the house, whence the enraged matron soon dislodged him with the brush-handle, and without mercy despatched him. In this snug retreat were found the greater part of the feathers, and many large fragments, of her whole family of chickens.

There is something in the character of the Owl so recluse, solitary and mysterious, something so discordant in the tones of its voice, heard only amid the silence and gloom of night, and in the most lonely and sequestered situations, as to have strongly impressed the minds of mankind in general with sensations of awe, and abhorrence of the whole tribe. The poets have indulged freely in this general prejudice; and in their descriptions and delineations of midnight storms, and gloomy scenes of nature, the Owl is generally introduced to heighten the horror of the picture. Ignorance and superstition, in all ages, and in all countries, listen to the voice of the Owl, and even contemplate its physiognomy with feelings of disgust, and a kind of fearful awe. The priests, or conjurers, among some of our Indian nations, have taken advantage of the reverential horror for this bird, and have adopted the *Great Horned Owl*, the subject of the present account, as the symbol or emblem of their office. "Among the Creeks," says Mr. Bartram, "the junior priests, or students, constantly wear a white mantle, and have a Great Owl skin cased and stuffed very ingeniously, so well executed as almost to appear like the living bird, having large sparkling glass beads, or buttons, fixed in the head for eyes. This insignia of wisdom and divination they wear sometimes as a crest on the top of the head; at other times the image sits on the arm, or is borne on the hand. These

bachelors are also distinguished from the other people by their taciturnity, grave and solemn countenance, dignified step, and singing to themselves songs or hymns in a low, sweet voice, as they stroll about the town."*

Nothing is a more effectual cure for superstition than a knowledge of the general laws and productions of nature; nor more forcibly leads our reflections to the first, great, self-existent CAUSE of all, to whom our reverential awe is then humbly devoted, and not to any of his dependent creatures. With all the gloomy habits, and ungracious tones, of the Owl, there is nothing in this bird supernatural or mysterious, or more than that of a simple bird of prey, formed for feeding by night, like many other animals, and of reposing by day. The harshness of its voice, occasioned by the width and capacity of its throat, may be intended by heaven as an alarm and warning to the birds and animals on which it preys, to secure themselves from danger. The voices of all carnivorous birds and animals are also observed to be harsh and hideous, probably for this very purpose.

The Great Horned Owl is not migratory, but remains with us the whole year. During the day he slumbers in the thick evergreens of deep swamps, or seeks shelter in large hollow trees. He is very rarely seen abroad by day, and never but when disturbed. In the month of May they usually begin to build. The nest is generally placed in the fork of a tall tree, and is constructed of sticks, piled in considerable quantities, lined with dry leaves, and a few feathers. Sometimes they choose a hollow tree, and in that case carry in but few materials. The female lays four eggs, nearly as large as those of a hen, almost globular, and of a pure white. In one of these nests, after the young had flown, were found the heads and bones of two chickens, the legs and head of the Golden-winged Woodpecker, and part of the wings and feathers of several other birds. It is generally conjectured that they hatch but once in the season.

The length of the male of this species is twenty inches; the bill is large, black and strong, covered at the base with a cere; the eyes golden yellow; the horns are three inches in length, and very broad, consisting of twelve or fourteen feathers, their webs black, broadly edged with bright tawny; face rusty, bounded on each side by a band of black; space between the eyes and bill whitish; whole lower parts elegantly marked with numerous transverse bars of dusky, on a bright tawny ground, thinly interspersed with white; vent pale yellow ochre, barred with narrow lines of brown; legs and feet large and covered with feathers, or hairy down, of a pale brown color; claws very large, blue black; tail rounded, extending about an inch beyond the tips of the

* Travels, p. 504.

wings, crossed with six or seven narrow bars of brown, and variegated or marbled with brown and tawny; whole upper parts finely pencilled with dusky, on a tawny and whitish ground; chin pure white, under that a band of brown, succeeded by another narrow one of white; eyes very large.

The female is full two feet in length, and has not the white on the throat so pure. She has also less of the bright ferruginous or tawny tint below; but is principally distinguished by her superior magnitude.

SPECIES VIII. *STRIX OTUS*.

LONG-EARED OWL.

[Plate LI. Fig. 3, Female.]

GMEL. *Syst.* I., p. 288.—BEWICK, I., p. 84.*

THIS Owl is common to both continents, and is much more numerous in Pennsylvania than the White, or Barn Owl: six or seven were found in a single tree, about fifteen miles from this city. There is little doubt but this species is found inhabiting America to a high latitude; though we have no certain accounts of the fact. Except in size, this species has more resemblance to the Great Horned Owl than any other of its tribe. It resembles it also in breeding among the branches of tall trees; lays four eggs of nearly a round form, and pure white.† The young are grayish white until nearly full grown, and roost during the day close together on a limb, among the thickest of the foliage. This Owl is frequently seen abroad during the day, but is not remarkable for its voice or habits.

The Long-eared Owl is fourteen inches and a half long, and three feet two inches in extent; ears large, composed of six feathers, gradually lengthening from the front one backwards, black, edged with rusty yellow; irides vivid yellow; inside of the circle of the face white, outside or cheeks rusty; at the internal angle of the eye a streak of black; bill blackish horn color; forehead and crown deep brown, speckled with minute points of white and pale rusty; outside circle of the face black, finely marked with small curving spots of white; back and wings dark brown, sprinkled and spotted with white, pale ferruginous and dusky; primaries barred with brownish yellow and dusky,

* We add the following synonyms: *Strix otus*, LINN. *Syst.* I., p. 92, No. 4, ed. 10.—BUFF. *Pl. Enl.* 29.—LATH. *Gen. Syn.* I., p. 121, *Ind. Orn.* p. 55.

† Buffon remarks, that it rarely constructs a nest of its own; but not unfrequently occupies that of others, particularly the Magpie.

darkening towards the tips; secondaries more finely barred, and powdered with white and dusky; tail rounded at the end, of the same length with the wings, beautifully barred and marbled with dull white and pale rusty, on a dark brown ground; throat and breast clouded with rusty, cream, black and white; belly beautifully streaked with large arrow-heads of black; legs and thighs plain pale rusty, feathered to the claws, which are blue black, large and sharp; inside of the wing brownish yellow, with a large spot of black at the root of the primaries.

This was a female. Of the male I cannot speak precisely; though from the numbers of these birds which I have examined in the Autumn, when it is difficult to ascertain their sex, I conjecture that they differ very little in color.

About six or seven miles below Philadelphia, and not far from the Delaware, is a low swamp,* thickly covered with trees, and inundated during great part of the year. This place is the resort of great numbers of the Qua-bird, or Night Raven (*Ardea nycticorax*), where they build in large companies. On the twenty-fifth of April, while wading among the dark recesses of this forest, observing the habits of these birds, I discovered a *Long-eared Owl*, which had taken possession of one of their nests, and was sitting; on mounting to the nest, I found it contained four eggs, and breaking one of these, the young appeared almost ready to leave the shell. There were numbers of the Qua-birds' nests on the adjoining trees all around, and one of them actually on the same tree. Thus we see how unvarying are the manners of this species, however remote and different the countries may be where it has taken up its residence.

* Commonly known by the name of *Cocker's* swamp, from time immemorial a noted place for the shooting of Woodcocks.

SPECIES IX. *STRIX NÆVIA*.*

MOTTLED OWL.

[Plate XIX. Fig. 1, Female.]

Arct. Zool. 231, No. 118.—LATHAM, I., 126.—TURTON, I., 167.

ON contemplating the grave and antiquated figure of this *night wanderer*, so destitute of everything like gracefulness of shape, I can scarcely refrain from smiling at the conceit, of the ludicrous appearance this bird must have made, had nature bestowed on it the powers of song, and given it the faculty of warbling out sprightly airs, while robed in such a solemn exterior. But the great God of Nature hath, in his wisdom, assigned to this class of birds a more unsocial, and less noble, though, perhaps, not less useful, disposition by assimilating them, not only in form of countenance, but in voice, manners, and appetite, to some particular beasts of prey; secluding them from the enjoyment of the gay sunshine of day, and giving them little more than the few solitary hours of morning and evening twilight, to procure their food, and pursue their amours; while all the tuneful tribes, a few excepted, are wrapped in silence and repose. That their true character, however, should not be concealed from those weaker animals on whom they feed (for Heaven abhors deceit and hypocrisy), He has stamped their countenance with strong traits of their murderer the Cat; and birds in this respect are, perhaps, better physiognomists than men.

The Owl now before us is chiefly a native of the northern regions, arriving here, with several others, about the commencement of cold weather; frequenting the uplands and mountainous districts, in preference to the lower parts of the country; and feeding on mice, small birds, beetles, and crickets. It is rather a scarce species in Pennsylvania; flies usually in the early part of night and morning; and is sometimes observed sitting on the fences during day, when it is easily caught; its vision at that time being very imperfect.

The bird represented in the plate was taken in this situation, and presented to me by a friend. I kept it in the room beside me for some time; during which its usual position was such as I have given it. Its eyelids were either half shut, or slowly and alternately opening and

* *Strix asio*. This is the adult of the following species, and the name *asio* given to the young, must be retained for the species, as the young was first described. See LINN. *Syst.* I., p. 92, No. 3, ed. 10.

shutting, as if suffering from the glare of day; but no sooner was the sun set, than its whole appearance became lively and animated; its full and globular eyes shone like those of a cat; and it often lowered its head, in the manner of a cock when preparing to fight, moving it from side to side, and also vertically, as if reconnoitring you with great sharpness. In flying through the room, it shifted from place to place with the silence of a spirit, (if I may be allowed the expression), the plumage of its wings being so extremely fine and soft as to occasion little or no friction with the air; a wise provision of nature, bestowed on the whole genus, to enable them, without giving alarm, to seize their prey in the night. For an hour or two in the evening, and about break of day, it flew about with great activity. When angry, it snapped its bill repeatedly with violence, and so loud as to be heard in the adjoining room, swelling out its eyes to their full dimensions, and lowering its head as before described. It swallowed its food hastily, in large mouthfuls; and never was observed to drink. Of the eggs and nest of this species I am unable to speak.

The Mottled Owl is ten inches long, and twenty-two in extent; the upper part of the head, the back, ears and lesser wing-coverts, are dark brown, streaked and variegated with black, pale brown, and ash; wings lighter, the greater coverts and primaries spotted with white; tail short, even, and mottled with black, pale brown, and whitish, on a dark brown ground; its lower side gray; horns (as they are usually called) very prominent, each composed of ten feathers; increasing in length from the front backwards, and lightest on the inside; face whitish, marked with small touches of dusky, and bounded on each side with a circlet of black; breast and belly white, beautifully variegated with ragged streaks of black, and small transverse touches of brown; legs feathered nearly to the claws, with a kind of hairy down, of a pale brown color; vent and under tail-coverts white, the latter slightly marked with brown; iris of the eye a brilliant golden yellow; bill and claws bluish horn color.

This was a female. The male is considerably less in size; the general colors darker; and the white on the wing-coverts not so observable.

Hollow trees, either in the woods or orchard, or close evergreens, in retired situations, are the usual roosting places of this and most of our other species. These retreats, however, are frequently discovered by the Nuthatch, Titmouse, or Blue Jay, who instantly raise the alarm; a promiscuous group of feathered neighbors soon collect round the spot, like crowds in the streets of a large city, when a thief or murderer is detected; and by their insults and vociferation oblige the recluse to seek for another lodging elsewhere. This may account for the circumstance of sometimes finding them abroad during the day, on fences and other exposed situations.

*STRIX ASIO.**
RED OWL.

[Plate XLII. Fig. 1, Female.]

Little Owl, CATESB. I., 7.—LATH. I., 123.—LINN. *Syst.* 132. *Arct. Zool.* II., No. 117.
TURT. *Syst.* I., p. 166.

THIS is another of our nocturnal wanderers, well known by its common name, the *Little Screech Owl*; and noted for its melancholy quivering kind of wailing in the evenings, particularly towards the latter part of summer and autumn, near the farm-house. On clear moonlight nights, they answer each other from various parts of the fields or orchard; roost during the day in thick evergreens, such as cedar, pine, or juniper trees, and are rarely seen abroad in sunshine. In May they construct their nest in the hollow of a tree, often in the orchard, in an old apple tree; the nest is composed of some hay and a few feathers; the eggs are four, pure white and nearly round. The young are at first covered with a whitish down.

The bird represented in the plate, I kept for several weeks in the room beside me. It was caught in a barn, where it had taken up its lodging, probably for the greater convenience of mousing; and being unhurt, I had an opportunity of remarking its manners. At first it struck itself so forcibly against the window, as frequently to deprive it, seemingly, of all sensation for several minutes; this was done so repeatedly, that I began to fear that either the glass, or the Owl's skull, must give way. In a few days, however, it either began to comprehend something of the matter, or to take disgust at the glass, for it never repeated its attempts; and soon became quite tame and familiar. Those who have seen this bird only in the day, can form but an imperfect idea of its activity, and even sprightliness, in its proper season of exercise. Throughout the day, it was all stillness and gravity; its eyelids half shut, its neck contracted, and its head shrunk seemingly into its body; but scarcely was the sun set, and twilight began to approach, when its eyes became full and sparkling, like two living globes of fire; it crouched on its perch, reconnoitred every object around with looks of eager fierceness; alighted and fed; stood on the meat with clenched talons, while it tore it in morsels with its bill; flew round the room with the silence of thought, and

* This is the young bird.

perching, moaned out its melancholy notes, with many lively gesticulations, not at all accordant with the pitiful tone of its ditty, which reminded one of the shivering moanings of a half-frozen puppy.

This species is found generally over the United States, and is not migratory.

The Red Owl is eight inches and a half long, and twenty-one inches in extent; general color of the plumage above, a bright nut brown or tawny red; the shafts black; exterior edges of the outer row of scapulars white; bastard wing, the five first primaries and three or four of the first greater coverts, also spotted with white; whole wing quills spotted with dusky on their exterior webs; tail rounded, transversely barred with dusky and pale brown; chin, breast, and sides, bright reddish brown, streaked laterally with black, intermixed with white; belly and vent white, spotted with bright brown; legs covered to the claws with pale brown hairy down; extremities of the toes and claws pale bluish, ending in black; bill a pale bluish horn color; eyes vivid yellow; inner angles of the eyes, eyebrows, and space surrounding the bill, whitish; rest of the face nut brown; head horned or eared, each consisting of nine or ten feathers, of a tawny red, shafted with black.

ORDER II. PICÆ. PIES.

GENUS 4. LANIUS. SHRIKE.

SPECIES I. *LANIUS EXCUBITOR*?*

GREAT AMERICAN SHRIKE, OR BUTCHER-BIRD.

[Plate V. Fig. 1.]

La Pic-grièche grise, BUFF. I., 296. *Pl. enl.* 445.—*White Whisky-John*, *Phil. Trans.* LXII., p. 386.—*Arct. Zool.* II., No. 127.

THE form and countenance of this bird bespeak him full of courage and energy; and his true character does not belie his appearance, for he possesses these qualities in a very eminent degree. He is represented in the plate rather less than his true size; but in just proportion; and with a fidelity that will enable the European naturalist to determine, whether this be really the same with the great Cinereous Shrike (*Lanius excubitor*, Linn.), of the eastern continent or not; though the progressive variableness of the plumage, passing, according to age, and sometimes to

* *Lanius septentrionalis*, GMEL.

climate, from ferruginous to pale ash, and even to a bluish white, renders it impossible that this should be an exact representation of every individual.

This species is by no means numerous in the lower parts of Pennsylvania ; though most so during the months of November, December and March. Soon after this it retires to the north, and to the higher inland parts of the country to breed. It frequents the deepest forests ; builds a large and compact nest in the upright fork of a small tree, composed outwardly of dry grass, and whitish moss, and warmly lined within with feathers. The female lays six eggs, of a pale cinereous color, thickly marked at the greater end with spots and streaks of rufous. She sits fifteen days. The young are produced early in June, sometimes towards the latter end of May ; and during the greater part of the first season are of a brown ferruginous color on the back.

When we compare the beak of this species, with his legs and claws, they appear to belong to two very different orders of birds ; the former approaching, in its conformation, to that of the Accipitrine ; the latter to those of the Pies ; and, indeed, in his food and manners, he is assimilated to both. For though man has arranged and subdivided this numerous class of animals into separate tribes and families, yet nature has united these to each other by such nice gradations, and so intimately, that it is hardly possible to determine where one tribe ends, or the succeeding commences. We therefore find several eminent naturalists classing this genus of birds with the Accipitrine, others with the Pies. Like the former he preys, occasionally, on other birds ; and like the latter on insects, particularly grasshoppers, which I believe to be his principal food ; having at almost all times, even in winter, found them in his stomach. In the month of December, and while the country was deeply covered with snow, I shot one of these birds, near the head waters of the Mohawk river, in the state of New York, the stomach of which was entirely filled with large black spiders. He was of a much purer white, above, than any I have since met with ; though evidently of the same species with the present ; and I think it probable, that the males become lighter colored as they advance in age, till the minute transverse lines of brown on the lower parts almost disappear.

In his manners he has more resemblance to the pies than to birds of prey, particularly in the habit of carrying off his surplus food, as if to hoard it for future exigences ; with this difference, that Crows, Jays, Magpies, &c., conceal theirs at random, in holes and crevices, where perhaps it is forgotten or never again found ; while the Butcher-bird sticks his on thorns and bushes, where it shrivels in the sun, and soon becomes equally useless to the hoarder. Both retain the same habits in a state of confinement, whatever the food may be that is presented to them.

This habit of the Shrike of seizing and impaling grasshoppers, and other insects, on thorns, has given rise to an opinion, that he places their carcasses there, by way of baits, to allure small birds to them, while he himself lies in ambush to surprise and destroy them. In this, however, they appear to allow him a greater portion of reason and contrivance than he seems entitled to, or than other circumstances will altogether warrant; for we find that he not only serves grasshoppers in this manner, but even small birds themselves, as those have assured me who have kept them in cages in this country, and amused themselves with their manœuvres. If so, we might as well suppose the farmer to be inviting Crows to his corn, when he hangs up their carcasses around it, as the Butcher-bird to be decoying small birds by a display of the dead bodies of their comrades.

In the "Transactions of the American Philosophical Society," vol. iv., p. 124, the reader may find a long letter on this subject, from Mr. John Heckewelder, of Bethlehem, to Dr. Barton; the substance of which is as follows: That on the 17th of December, 1795, he (Mr. Heckewelder) went to visit a young orchard, which had been planted a few weeks before, and was surprised to observe on every one of the trees one, and on some, two and three grasshoppers, stuck down on the sharp thorny branches; that on inquiring of his tenant the reason of this, he informed him, that they were stuck there by a small bird of prey called by the Germans *Neuntoedter* (Ninekiller), which caught and stuck nine grasshoppers a day; and he supposed that as the bird itself never fed on grasshoppers, it must do it for pleasure. Mr. Heckewelder now recollected that one of those *Ninekillers* had, many years before, taken a favorite bird of his out of his cage, at the window; since which he had paid particular attention to it; and being perfectly satisfied that it lived entirely on mice and small birds, and, moreover, observing the grasshoppers on the trees all fixed in natural positions, as if alive, he began to conjecture that this was done to decoy such small birds as feed on these insects to the spot, that he might have an opportunity of devouring them. "If it were true," says he, "that this little hawk had stuck them up for himself, how long would he be in feeding on one or two hundred grasshoppers? But if it be intended to seduce the smaller birds to feed on these insects, in order to have an opportunity of catching them, that number, or even one-half, or less, may be a good bait all winter," &c., &c.

This is indeed a very pretty fanciful theory, and would entitle our bird to the epithet *Fowler*, perhaps with more propriety than *Lanius*, or *Butcher*; but, notwithstanding the attention which Mr. Heckewelder professes to have paid to this bird, he appears not only to have been unacquainted that grasshoppers were in fact the favorite food of this Ninekiller, but never once to have considered, that grasshoppers would

be but a very insignificant and tasteless bait for our winter birds, which are chiefly those of the Finch kind, that feed almost exclusively on hard seeds and gravel; and among whom five hundred grasshoppers might be stuck up on trees and bushes, and remain there untouched by any of them for ever. Besides, where is his necessity of having recourse to such refined stratagems, when he can at any time seize upon small birds by mere force of flight? I have seen him, in an open field, dart after one of our small sparrows, with the rapidity of an arrow, and kill it almost instantly. Mr. William Bartram long ago informed me, that one of these Shrikes had the temerity to pursue a Snow-bird (*F. Hudsonia*), into an open cage, which stood in the garden; and before they could arrive to its assistance, had already strangled and scalped it, though he lost his liberty by the exploit. In short I am of opinion, that his resolution and activity are amply sufficient to enable him to procure these small birds whenever he wants them, which I believe is never but when hard pressed by necessity, and a deficiency of his favorite insects; and that the Crow or the Blue Jay may, with the same probability, be supposed to be laying baits for mice and flying squirrels, when they are hoarding their Indian corn, as he for birds while thus disposing of the exuberance of his favorite food. Both the former and the latter retain the same habits in a state of confinement; the one filling every seam and chink of his cage with grain, crumbs of bread, &c., and the other sticking up, not only insects, but flesh, and the bodies of such birds as are thrown in to him, on nails or sharpened sticks, fixed up for the purpose. Nor, say others, is this practice of the Shrike difficult to be accounted for. Nature has given to this bird a strong, sharp, and powerful beak, a broad head, and great strength in the muscles of his neck; but his legs, feet and claws, are by no means proportionably strong; and are unequal to the task of grasping and tearing his prey, like those of the Owl and Falcon kind. He therefore wisely avails himself of the powers of the former, both in strangling his prey, and in tearing it to pieces while feeding.

The character of the Butcher-bird is entitled to no common degree of respect. His activity is visible in all his motions; his courage and intrepidity beyond every other other bird of his size (one only excepted, the King-bird, *L. tyrannus*, Linn.), and in affection for his young he is surpassed by no other. He associates with them in the latter part of summer, the whole family hunting in company. He attacks the largest Hawk, or Eagle, in their defence, with a resolution truly astonishing; so that all of them respect him; and on every occasion decline the contest. As the snows of winter approach, he descends from the mountainous forests, and from the regions of the north, to the more cultivated parts of the country, hovering about our

hedge-rows, orchards and meadows, and disappears again early in April.

The Great American Shrike is ten inches in length, and thirteen in extent; the upper part of the head, neck and back, is pale cinereous; sides of the head nearly white, crossed with a bar of black, that passes from the nostril through the eye to the middle of the neck; the whole under parts, in some specimens, are nearly white, and thickly marked with minute transverse curving lines of light brown; the wings are black, tipped with white, with a single spot of white on the primaries, just below their coverts; the scapulars, or long downy feathers that fall over the upper part of the wing, are pure white; the rump and tail-coverts a very fine gray or light ash; the tail is cuneiform, consisting of twelve feathers, the two middle ones wholly black, the others tipped more and more with white to the exterior ones, which are nearly all white; the legs, feet and claws, are black; the beak straight, thick, of a light blue color; the upper mandible furnished with a sharp process bending down greatly at the point, where it is black, and beset at the base with a number of long black hairs or bristles; the nostrils are also thickly covered with recumbent hairs; the iris of the eye is a light hazel, pupil black. The figure in the plate will give a perfect idea of the bird. The female is easily distinguished by being ferruginous on the back and head; and having the band of black extending only *behind* the eye, and of a dirty brown or burnt color, the under parts are also something rufous, and the curving lines more strongly marked; she is rather less than the male, which is different from birds of prey in general, the females of which are usually the larger of the two.

In the Arctic Zoology we are told that this species is frequent in Russia, but does not extend to Siberia; yet one was taken within Behring's straits, on the Asiatic side, in lat. 66°; and the species probably extends over the whole continent of North America, from the western ocean. Mr. Bell, while on his travels through Russia, had one of these birds given him, which he kept in a room, having fixed up a sharpened stick for him in the wall; and on turning small birds loose in the room, the Butcher-bird instantly caught them by the throat in such a manner as soon to suffocate them; and then stuck them on the stick, pulling them on with bill and claws; and so served as many as were turned loose, one after another, on the same stick.*

* Edwards, v. vii., p. 231.

SPECIES II. *LANIUS CAROLINENSIS*.*

LOGGERHEAD SHRIKE.

[Plate XXII. Fig. 5.]

THIS species has a considerable resemblance to the Great American Shrike. It differs, however, from that bird in size, being a full inch shorter, and in color, being much darker on the upper parts; and in having the frontlet black. It also inhabits the warmer parts of the United States; while the Great American Shrike is chiefly confined to the northern regions, and seldom extends to the south of Virginia.

This species inhabits the rice plantations of Carolina and Georgia, where it is protected for its usefulness in destroying mice. It sits, for hours together, on the fence, beside the stacks of rice, watching like a cat; and as soon as it perceives a mouse, darts on it like a Hawk. It also feeds on crickets and grasshoppers. Its note, in March, resembled the clear creaking of a sign board, in windy weather. It builds its nest, as I was informed, generally in a detached bush, much like that of the Mocking-bird; but as the spring was not then sufficiently advanced, I had no opportunity of seeing its eggs. It is generally known by the name of the *Loggerhead*.

This species is nine inches long and thirteen in extent; the color above is cinereous or dark ash; scapulars, and line over the eye, whitish; wings black, with a small spot of white at the base of the primaries, and tipped with white; a stripe of black passes along the front through each eye, half way down the side of the neck; eye dark hazel, sunk below the eyebrow; tail cuneiform, the four middle feathers wholly black, the four exterior ones on each side tipped more and more with white to the outer one which is nearly all white; whole lower parts white, and in some specimens, both of males and females, marked with transverse lines of very pale brown; bill and legs black.

The female is considerably darker both above and below, but the black does not reach so high on the front; it is also rather less in size.

* *Lanius Ludovicianus*, LINN., which name must be adopted. In Buffon, pl. enl. 528, there is a figure of a young bird.—Synonymes: *La Pie-griesche de la Louisiane*, BRISS. 2, p. 162.—LATH. Ind. Orn. p. 69.

GENUS V. PSITTACUS. PARROT.

P. CAROLINENSIS.

CAROLINA PARROT.

[Plate XXVI. Fig. 1.]

LINN. *Syst.* I., p. 97, ed. 10.—CATESBY, I., 11.—LATHAM, I., 227.—*Arct. Zool.* 242, No. 132. Ibid. 133.*

OF one hundred and sixty-eight kinds of Parrots, enumerated by European writers as inhabiting the various regions of the globe, this is the only species found native within the territory of the United States. The vast and luxuriant tracts lying within the torrid zone, seem to be the favorite residence of those noisy, numerous, and richly-plumaged tribes. The Count de Buffon has, indeed, circumscribed the whole genus of Parrots to a space not extending more than twenty-three degrees on each side of the equator; but later discoveries have shown this statement to be incorrect; as these birds have been found on our continent as far south as the Straits of Magellan, and even on the remote shores of Van Diemen's Land, in Terra Australasia. The species now under consideration is also known to inhabit the interior of Louisiana, and the shores of the Mississippi and Ohio, and their tributary waters, even beyond the Illinois river, to the neighborhood of Lake Michigan, in lat. 42° North; and, contrary to the generally received opinion, is chiefly *resident* in all these places. Eastward, however, of the great range of the Alleghany, it is seldom seen farther north than the State of Maryland; though straggling parties have been occasionally observed among the valleys of the Juniata; and according to some, even twenty-five miles to the northwest of Albany, in the State of New York.† But such accidental visits furnish no certain criteria by which to judge of their usual extent of range; those aerial voyagers, as well as others who navigate the deep, being subject to be cast away, by the violence of the elements, on distant shores and unknown countries.

From these circumstances of the northern residence of this species, we might be justified in concluding it to be a very hardy bird, more capable of sustaining cold than nine-tenths of its tribe; and so I believe

* We add the following synonymes: *La Perruche de la Caroline*, BRISS. 4, p. 350.—*Orange-headed Parrot*, LATH. *Gen. Syn.* I., p. 304. *Ind. Orn.* p. 93.

† BARTON's Fragments, &c., p. 6, Intro.

it is; having myself seen them, in the month of February, along the banks of the Ohio, in a snow storm, flying about like pigeons, and in full cry.

The preference, however, which this bird gives to the western countries, lying in the same parallel of latitude with those eastward of the Alleghany mountains, which it rarely or never visits, is worthy of remark; and has been adduced, by different writers, as a proof of the superior mildness of climate in the former to that of the latter. But there are other reasons for this partiality equally powerful, though hitherto overlooked; namely, certain peculiar features of country, to which these birds are particularly and strongly attached; these are, low, rich, alluvial bottoms, along the borders of creeks, covered with a gigantic growth of sycamore trees or button-wood—deep and almost impenetrable swamps, where the vast and towering cypress lift their still more majestic heads; and those singular salines, or, as they are usually called, *licks*, so generally interspersed over that country, and which are regularly and eagerly visited by the Paroquets. A still greater inducement is the superior abundance of their favorite fruits. That food which the Paroquet prefers to all others, is the seeds of the cockle-burr, a plant rarely found in the lower parts of Pennsylvania, or New York; but which unfortunately grows in too great abundance along the shores of the Ohio and Mississippi, so much so as to render the wool of those sheep, that pasture where it most abounds, scarcely worth the cleaning, covering them with one solid mass of burrs, wrought up and imbedded into the fleece, to the great annoyance of this valuable animal. The seeds of the cypress-tree and hackberry, as well as beech-nuts, are also great favorites with these birds; the two former of which are not commonly found in Pennsylvania, and the latter by no means so general or so productive. Here then are several powerful reasons, more dependent on soil than climate, for the preference given by these birds to the luxuriant regions of the west. Pennsylvania, indeed, and also Maryland, abound with excellent apple orchards, on the ripe fruit of which the Paroquets occasionally feed. But I have my doubts whether their depredations in the orchard be not as much the result of wanton play and mischief, as regard for the seeds of the fruit, which they are supposed to be in pursuit of. I have known a flock of these birds alight on an apple tree, and have myself seen them twist off the fruit, one by one, strewing it in every direction around the tree, without observing that any of the depredators descended to pick them up. To a Paroquet which I wounded, and kept for some considerable time, I very often offered apples, which it uniformly rejected; but burrs, or beech-nuts never. To another very beautiful one, which I brought from New Orleans, and which is now sitting in the room beside me, I have frequently offered this fruit, and also the seeds separately, which I never knew it to taste.

Their local attachments also prove that food more than climate determines their choice of country. For even in the states of Ohio, Kentucky, and the Mississippi territory, unless in the neighborhood of such places as have been described, it is rare to see them. The inhabitants of Lexington, as many of them assured me, scarcely ever observe them in that quarter. In passing from that place to Nashville, a distance of two hundred miles, I neither heard nor saw any, but at a place called Madison's Lick. In passing on, I next met with them on the banks and rich flats of the Tennessee river; after this I saw no more till I reached Bayo St. Pierre, a distance of several hundred miles; from all which circumstances, I think we cannot, from the residences of these birds, establish with propriety, any correct standard by which to judge of the comparative temperatures of different climates.

In descending the river Ohio, by myself, in the month of February, I met with the first flock of Paroquets at the mouth of the Little Scioto. I had been informed, by an old and respectable inhabitant of Marietta, that they were sometimes, though rarely, seen there. I observed flocks of them, afterwards, at the mouth of the Great and Little Miami, and in the neighborhood of numerous creeks, that discharge themselves into the Ohio. At Big-Bone Lick, thirty miles above the mouth of Kentucky river, I saw them in great numbers. They came screaming through the woods in the morning, about an hour after sunrise, to drink the salt water, of which they, as well as the pigeons, are remarkably fond. When they alighted on the ground, it appeared, at a distance, as if covered with a carpet of the richest green, orange and yellow. They afterwards settled, in one body, on a neighboring tree, which stood detached from any other, covering almost every twig of it, and the sun shining strongly on their gay and glossy plumage, produced a very beautiful and splendid appearance. Here I had an opportunity of observing some very particular traits of their character. Having shot down a number, some of which were only wounded, the whole flock swept repeatedly around their prostrate companions, and again settled on a low tree, within twenty yards of the spot where I stood. At each successive discharge, though showers of them fell, yet the affection of the survivors seemed rather to increase; for after a few circuits around the place, they again alighted near me, looking down on their slaughtered companions, with such manifest symptoms of sympathy and concern, as entirely disarmed me. I could not but take notice of the remarkable contrast between their elegant manner of flight, and their lame and crawling gait among the branches. They fly very much like the Wild Pigeon, in close, compact bodies, and with great rapidity, making a loud and outrageous screaming, not unlike that of the Red-headed Woodpecker. Their flight is sometimes in a direct line; but most usually circuitous, making a great variety of elegant and easy serpentine meanders, as if for pleasure.

They are particularly attached to the large sycamores, in the hollow of the trunks, and branches of which, they generally roost, thirty or forty, and sometimes more, entering at the same hole. Here they cling close to the sides of the tree, holding fast by the claws, and also by the bills. They appear to be fond of sleep, and often retire to their holes during the day, probably to take their regular *siesta*. They are extremely sociable with and fond of each other, often scratching each other's heads and necks, and always at night nestling as close as possible to each other, preferring, at that time, a perpendicular position, supported by their bill and claws. In the fall, when their favorite cockle-burrs are ripe, they swarm along the *coast*, or high grounds of the Mississippi, above New Orleans, for a great extent. At such times they are killed and eaten by many of the inhabitants; though I confess I think their flesh very indifferent. I have several times dined on it from necessity in the woods; but found it merely passable, with all the sauce of a keen appetite to recommend it.*

A very general opinion prevails, that the brains and intestines of the Carolina Paroquet are a sure and fatal poison to cats. I had determined, when at Big-Bone, to put this to the test of experiment; and for that purpose collected the brains and bowels of more than a dozen of them. But after close search Mrs. Puss was not to be found, being engaged perhaps on more agreeable business. I left the medicine with Mr. Colquhoun's agent, to administer it by the first opportunity, and write me the result; but I have never yet heard from him. A respectable lady near the town of Natchez, and on whose word I can rely, assured me, that she herself had made the experiment, and that, whatever might be the cause, the cat had actually died either on that or the succeeding day. A French planter near Bayo Fourche pretended to account to me for this effect, by positively asserting that the seeds of the cockle-burrs, on which the Paroquets so eagerly feed, were deleterious to cats; and thus their death was produced by eating the intestines of the bird. These matters might easily have been ascertained on the spot, which, however, a combination of trifling circumstances prevented me from doing. I several times carried a dose of the first description in my pocket, till it became insufferable, without meeting with a suitable *patient*, on whom, like other professional gentlemen, I might conveniently make a fair experiment.

I was equally unsuccessful in my endeavors to discover the time of

* Had our author been provided with proper apparatus to cook these birds, and suitable condiments, he would, doubtless, have been of a different opinion. Mr. T. Peale and myself, when in East Florida, where this species is found in great numbers, thought them excellent eating. In Florida the Paroquets are migratory. We saw the first flock of them, at the Cowford, on the river St. John, on the first of March: the greater part of them were males.—*G. Ord.*

incubation or manner of building among these birds. All agreed that they breed in hollow trees; and several affirmed to me that they had seen their nests. Some said they carried in no materials; others that they did. Some made the eggs white; others speckled. One man assured me that he had cut down a large beech-tree, which was hollow, and in which he found the broken fragments of upwards of twenty Paroquets' eggs, which were of a greenish yellow color. The nests, though destroyed in their texture by the falling of the tree, appeared, he said, to be formed of small twigs glued to each other, and to the side of the tree, in the manner of the Chimney Swallow. He added, that if it were the proper season, he could point out to me the weed from which they procured the gluey matter. From all these contradictory accounts, nothing certain can be deduced, except that they build in companies, in hollow trees. That they commence incubation late in summer, or very early in the spring, I think highly probable, from the numerous dissections I made in the months of March, April, May and June; and the great variety which I found in the color of the plumage of the head and neck, of both sexes, during the two former of these months, convinces me, that the young birds do not receive their full colors until the early part of the succeeding summer.

While Parrots and Paroquets, from foreign countries, abound in almost every street of our large cities, and become such great favorites, no attention seems to have been paid to our own, which in elegance of figure, and beauty of plumage, is certainly superior to many of them. It wants, indeed, that disposition for perpetual screaming and chattering, that renders some of the former, pests, not only to their keepers, but to the whole neighborhood in which they reside. It is alike docile and sociable; soon becomes perfectly familiar; and until equal pains be taken in its instruction, it is unfair to conclude it incapable of equal improvement in the language of man.

As so little has hitherto been known of the disposition and manners of this species, the reader will not, I hope, be displeased at my detailing some of these, in the history of a particular favorite, my sole companion in many a lonesome day's march, and of which the figure in the plate is a faithful resemblance.

Anxious to try the effects of education on one of those which I procured at Big-Bone Lick, and which was but slightly wounded in the wing, I fixed up a place for it in the stern of my boat, and presented it with some cockle-burrs, which it freely fed on in less than an hour after being on board. The intermediate time, between eating and sleeping, was occupied in gnawing the sticks that formed its place of confinement, in order to make a practicable breach, which it repeatedly effected. When I abandoned the river, and travelled by land, I wrapped it up closely in a silk handkerchief, tying it tightly around, and carried it in

my pocket. When I stopped for refreshment, I unbound my prisoner, and gave it its allowance, which it generally despatched with great dexterity, unhusking the seeds from the burr in a twinkling; in doing which it always employed its left foot to hold the burr, as did several others that I kept for some time. I began to think that this might be peculiar to the whole tribe, and that the whole were, if I may use the expression, *left-footed*; but by shooting a number afterwards, while engaged in eating mulberries, I found sometimes the left, sometimes the right foot, stained with the fruit; the other always clean; from which, and the constant practice of those I kept, it appears, that like the human species in the use of their hands, they do not prefer one or the other indiscriminately, but are either *left* or *right-footed*. But to return to my prisoner. In recommitting it to "durance vile," we generally had a quarrel; during which it frequently paid me in kind for the wound I had inflicted, and for depriving it of liberty, by cutting and almost disabling several of my fingers with its sharp and powerful bill. The path through the wilderness, between Nashville and Natchez, is in some places bad beyond description. There are dangerous creeks to swim, miles of morass to struggle through, rendered almost as gloomy as night by a prodigious growth of timber, and an underwood of canes and other evergreens; while the descent into these sluggish streams is often ten or fifteen feet perpendicular into a bed of deep clay. In some of the worst of these places, where I had, as it were, to fight my way through, the Paroquet frequently escaped from my pocket, obliging me to dismount and pursue it through the worst of the morass, before I could regain it. On these occasions I was several times tempted to abandon it; but I persisted in bringing it along. When at night I encamped in the woods, I placed it on the baggage beside me, where it usually sat, with great composure, dozing and gazing at the fire till morning. In this manner I carried it upwards of a thousand miles in my pocket, where it was exposed all day to the jolting of the horse, but regularly liberated at meal times, and in the evening, at which it always expressed great satisfaction. In passing through the Chickasaw and Choctaw nations, the Indians, wherever I stopped to feed, collected around me, men, women and children, laughing and seeming wonderfully amused with the novelty of my companion. The Chickasaws called it in their language "*Kelinky*;" but when they heard me call it Poll, they soon repeated the name; and wherever I chanced to stop among these people, we soon became familiar with each other through the medium of Poll. On arriving at Mr. Dunbar's, below Natchez, I procured a cage, and placed it under the piazza, where by its call it soon attracted the passing flocks, such is the attachment they have for each other. Numerous parties frequently alighted on the trees immediately above, keeping up a constant conversation with the prisoner.

One of these I wounded slightly in the wing, and the pleasure Poll expressed on meeting with this new companion was really amusing. She crept close up to it, as it hung on the side of the cage, chattered to it in a low tone of voice, as if sympathizing in its misfortune, scratched about its head and neck with her bill; and both at night nestled as close as possible to each other, sometimes Poll's head being thrust among the plumage of the other. On the death of this companion, she appeared restless and inconsolable for several days. On reaching New Orleans, I placed a looking-glass beside the place where she usually sat, and the instant she perceived her image, all her former fondness seemed to return, so that she could scarcely absent herself from it a moment. It was evident that she was completely deceived. Always when evening drew on, and often during the day, she laid her head close to that of the image in the glass, and began to doze with great composure and satisfaction. In this short space she had learnt to know her name; to answer and come when called on; to climb up my clothes, sit on my shoulder, and eat from my mouth. I took her with me to sea, determined to persevere in her education; but, destined to another fate, poor Poll, having one morning about day-break wrought her way through the cage, while I was asleep, instantly flew overboard, and perished in the gulf of Mexico.

The Carolina, or Illinois Parrot (for it has been described under both these appellations), is thirteen inches long, and twenty-one in extent; forehead and cheeks orange red; beyond this, for an inch and a half, down and round the neck, a rich and pure yellow; shoulder and bend of the wing also edged with rich orange red; the general color of the rest of the plumage is a bright yellowish silky green, with light blue reflections, lightest and most diluted with yellow below; greater wing-coverts, and roots of the primaries, yellow, slightly tinged with green; interior webs of the primaries deep dusky purple, almost black, exterior ones bluish green; tail long, cuneiform, consisting of twelve feathers, the exterior one only half the length, the others increasing to the middle ones, which are streaked along the middle with light blue; shafts of all the larger feathers, and of most part of the green plumage, black; knees and vent orange yellow; feet a pale whitish flesh color; claws black; bill white, or slightly tinged with pale cream; iris of the eye hazel; round the eye is a small space, without feathers, covered with a whitish skin; nostrils placed in an elevated membrane at the base of the bill, and covered with feathers; chin wholly bare of feathers, but concealed by those descending on each side; from each side of the palate hangs a lobe or skin of a blackish color; tongue thick and fleshy; inside of the upper mandible, near the point, grooved exactly like a file, that it may hold with more security.

The female differs very little in her colors and markings from the

male. After examining numerous specimens, the following appear to be the principal differences. The yellow on the neck of the female does not descend quite so far; the interior vanes of the primaries are brownish instead of black; and the orange red on the bend and edges of the wing is considerably narrower; in other respects the colors and markings are nearly the same. *

The young birds of the preceding year, of both sexes, are generally destitute of the yellow on the head and neck, until about the beginning or middle of March, having those parts wholly green, except the front and cheeks, which are orange red in them, as in the full grown birds. Towards the middle of March, the yellow begins to appear in detached feathers, interspersed among the green, varying in different individuals. In some which I killed about the last of that month, only a few green feathers remained among the yellow; and these were fast assuming the yellow tint; for the color changes *without change of plumage*.

What is called by Europeans the Illinois Parrot (*Psittacus pertinax*), is evidently the young bird in its imperfect colors. Whether the present species be found as far south as Brazil, as these writers pretend, I am unable to say; but from the great extent of country in which I have myself killed and examined these birds, I am satisfied that the present species, now described, is the only one inhabiting the United States.

Since the foregoing was written, I have had an opportunity, by the death of a tame Carolina Paroquet, to ascertain the fact of the poisonous effects of their head and intestines on cats. Having shut up a cat and her two kittens (the latter only a few days old), in a room with the head, neck, and whole intestines of the Paroquet, I found on the next morning the whole eaten, except a small part of the bill. The cat exhibited no symptom of sickness; and at this moment, three days after the experiment has been made, she and her kittens are in their usual health. Still, however, the effect might have been different, had the daily food of the bird been cockle burrs, instead of Indian corn.

Note.—From Mr. T. Peale, who was attached to the expedition commanded by Major Long, I learn, that during the time the party wintered at Engineer Cantonment, nearly eight hundred miles up the Missouri, they observed this species, at various periods, from the beginning of December, until the middle of February, although the thermometer (Fahrenheit) once sunk as low as 22° below zero. Mr. Peale is of opinion that the Paroquet migrates rather in quest of food, than in consequence of the cold. Being, like the Wild Pigeon, a bird of vigorous wing, and of a roving disposition, a journey of a few hundred miles can occasion it but a very little trouble.—*G. Ord.*

GENUS XIII. CORVUS. CROW.

SPECIES I. *C. CORAX*.

RAVEN.

[Plate LXXV. Fig. 3.]

GMEL. *Syst.* I., p. 364.—*Ind. Orn.* p. 150.—*Le Corbeau*, BRISS. 2, p. 8, et var.—
BUFF. *Ois.* 3, p. 13. *Pl. enl.* 495.—TEM. *Man. d'Orn.* p. 107.—*Raven*, LATH.
Gen. Syn. I., p. 367. *Id. sup.* p. 74.—PENN. *Brit. Zool.* No. 74. *Arct. Zool.* No.
134.—SHAW, *Gen. Zool.* 7, p. 341.—BEWICK, I., p. 100.—LOW, *Fauna Orcadensis*,
p. 45.

A KNOWLEDGE of this celebrated bird has been handed down to us from the earliest ages; and its history is almost coeval with that of man. In the best and most ancient of all books, we learn, that at the end of forty days, after the great flood had covered the earth, Noah, wishing to ascertain whether or not the waters had abated, sent forth a Raven, which did not return into the ark.* This is the first notice that is taken of this species. Though the Raven was declared unclean by the law of Moses, yet we are informed, that when the prophet Elijah provoked the enmity of Ahab, by prophesying against him, and hid himself by the brook Cherith, the Ravens were appointed by Heaven to bring him his daily food.† The color of the Raven gave rise to a similitude in one of the most beautiful of eclogues, which has been perpetuated in all subsequent ages, and which is not less pleasing for being trite or proverbial. The favorite of the royal lover of Jerusalem, in the enthusiasm of affection, thus describes the object of her adoration, in reply to the following question:

“What is thy beloved more than another beloved, O thou fairest among women?” “My beloved is white and ruddy, the chiefest among ten thousand. His head is as the most fine gold, *his locks are bushy, and black as a Raven*?”‡

The above mentioned circumstances taken into consideration, one should suppose that the lot of the subject of this chapter would have been of a different complexion from what history and tradition inform us is the fact. But in every country, we are told, the Raven is con-

* Genesis, viii. 7.

† 1 Kings, xvii. 5, 6.

‡ Song of Solomon, v. 9, 10, 11.

sidered an ominous bird, whose croakings foretell approaching evil; and many a crooked beldam has given interpretation to these oracles, of a nature to infuse terror into a whole community. Hence this ill-fated bird, immemorially, has been the innocent subject of vulgar obloquy and detestation.

Augury, or the art of foretelling future events by the flight, cries, or motions of birds, descended from the Chaldeans to the Greeks, thence to the Etrurians, and from them it was transmitted to the Romans.* The crafty legislators of these celebrated nations, from a deep knowledge of human nature, made superstition a principal feature of their religious ceremonies; well knowing that it required a more than ordinary policy to govern a multitude, ever liable to the fatal influences of passion; and who, without some timely restraints, would burst forth like a torrent, whose course is marked by wide-spreading desolation. Hence, to the purposes of polity the Raven was made subservient; and the Romans having consecrated it to Apollo, as to the god of divination, its flight was observed with the greatest solemnity; and its tones and inflections of voice were noted with a precision, which intimated a belief in its infallible prescience.

But the ancients have not been the only people infected with this species of superstition; the moderns, even though favored with the light of Christianity, have exhibited as much folly, through the impious curiosity of prying into futurity, as the Romans themselves. It is true that modern nations have not instituted their sacred colleges or sacerdotal orders, for the purposes of divination; but in all countries there have been self-constituted augurs, whose interpretations of omens have been received with religious respect by the credulous multitude. Even at this moment, in some parts of the world, if a Raven alight on a village church, the whole fraternity is in an uproar; and Heaven is importuned, in all the ardor of devotion, to avert the impending calamity.

The poets have taken advantage of this weakness of human nature, and in their hands the Raven is a fit instrument of terror. Shakspeare puts the following malediction into the mouth of his Caliban:

* That the science of augury is very ancient, we learn from the Hebrew lawgiver, who prohibits it, as well as every other kind of divination. Deut. chap. xviii. The Romans derived their knowledge of augury chiefly from the Tuscans or Etrurians, who practised it in the earliest times. This art was known in Italy before the time of Romulus, since that prince did not commence the building of Rome till he had taken the auguries. The successors of Romulus, from a conviction of the usefulness of the science, and at the same time not to render it contemptible by becoming too familiar, employed the most skilful augurs from Etruria, to introduce the practice of it into their religious ceremonies. And by a decree of the senate, some of the youth of the best families in Rome were annually sent into Tuscany, to be instructed in this art. Vide Cicero. de Divin. Also Calmet, and the Abbé Banier.

"As wicked dew, as e'er my mother brushed,
With *Raven's* feather, from unwholesome fen,
Drop on you both!"*

The ferocious wife of Macbeth, on being advised of the approach of Duncan, whose death she had conspired, thus exclaims :

"The *Raven* himself is hoarse,
That croaks the fatal entrance of Duncan,
Under my battlements!"†

The Moor of Venice says :

"It comes o'er my memory,
As doth the *Raven* o'er the infected house,
Boding to all."‡

The last quotation alludes to the supposed habit of this bird's flying over those houses which contain the sick, whose dissolution is at hand, and thereby announced. Thus Marlowe, in the *Jew of Malta*, as cited by Malone :

"The sad presaging *Raven* tolls
The sick man's passport in her hollow beak,
And in the shadow of the silent night
Doth shake contagion from her sable wing."

But it is the province of philosophy to dispel those illusions which bewilder the mind, by pointing out the simple truths which Nature has been at no pains to conceal, but which the folly of mankind has shrouded in all the obscurity of mystery.

The Raven is a general inhabitant of the United States, but is more common in the interior. On the lakes, and particularly in the neighborhood of the Falls of the river Niagara, they are numerous ; and it is a remarkable fact, that where they so abound, the Common Crow, *C. corone*, seldom makes its appearance ; being intimidated, it is conjectured, by the superior size and strength of the former, or by an antipathy which the two species manifest towards each other. This I had an opportunity of observing myself, in a journey during the months of August and September, along the lakes Erie and Ontario. The Ravens were seen every day, prowling about in search of the dead fish, which the waves are continually casting ashore, and which afford them an abundance of a favorite food ; but I did not see or hear a single Crow within several miles of the lakes ; and but very few through the whole of the Genesee country.

* *Tempest*, act i., scene 2.

† Act i., scene 5.

‡ *Othello*, act iv., scene 1.

The food of this species is dead animal matter of all kinds, not excepting the most putrid carrion, which it devours in common with the Vultures; worms, grubs, reptiles and shell-fish, the last of which, in the manner of the Crow, it drops from a considerable height in the air, on the rocks, in order to break the shells; it is fond of birds' eggs, and is often observed sneaking around the farm-house, in search of the eggs of the domestic poultry, which it sucks with eagerness; it is likewise charged with destroying young ducks and chickens, and lambs which have been yeaned in a sickly state. The Raven, it is said, follows the hunters of deer, for the purpose of falling heir to the offal;* and the huntsmen are obliged to cover their game, when it is left in the woods, with their hunting frocks, to protect it from this thievish connoisseur, who, if he have an opportunity, will attack the region of the kidneys, and mangle the saddle without ceremony.

Buffon says that "the Raven *plucks out the eyes of Buffaloes*, and then, *fixing on the back, it tears off the flesh deliberately*; and what renders the ferocity more detestable, it is not incited by the cravings of hunger, but by the appetite for carnage; for it can subsist on fruits, seed of all kinds, and indeed may be considered as an omnivorous animal." This is mere fable, and of a piece with many other absurdities of the same agreeable, but fanciful author.

This species is found almost all over the habitable globe. We trace it in the north from Norway to Greenland, and hear of it in Kamtschatka. It is common everywhere in Russia and Siberia, except within the Arctic circle;† and all through Europe. Kolben enumerates the Raven among the birds of the Cape of Good Hope;‡ De Grandpré represents it as numerous in Bengal, where they are said to be protected for their usefulness;§ and the unfortunate La Pérouse saw them at *Baie de Chastries*, on the east coast of Tartary; likewise at *Port des François*; 58° 37' north latitude, and 139° 50' west longitude; and at Monterey Bay, North California.|| The English circumnavigators met with them at Nootka Sound;¶ and at the Sandwich Islands, two being seen in the village of Kakooa; also at Owhyhee, and supposed to be adored there, as they were called Eatoos.** Our intrepid American travellers, under the command of Lewis and Clark, shortly after they embarked on the river Columbia, saw abundance of Ravens, which were attracted thither

* This is the case in those parts of the United States where the deer are hunted without dogs: where these are employed, they are generally rewarded with the offal.

† Latham.

‡ Medley's Kolben, vol. ii., p. 136.

§ Voy. in the Indian Ocean, p. 148.

|| Voy. par I. F. G. De la Pérouse, ii., p. 129, 203, 443.

¶ Cook's last Voy. ii., p. 236. Am. ed.

** Idem, iii., p. 329.

by the immense quantity of dead salmon which lined the shores.* They are found at all seasons at Hudson's Bay;† are frequent in Mexico;‡ and it is more than probable that they inhabit the whole continent of America.

The Raven measures, from the tip of the bill to the end of the tail, twenty-six inches, and is four feet in extent; the bill is large and strong, of a shining black, notched near the tip, and three inches long, the setaceous feathers which cover the nostrils extend half its length; the eyes are black; the general color is a deep glossy black, with steel-blue reflections; the lower parts are less glossy; the tail is rounded, and extends about two inches beyond the wings; the legs are two inches and a half in length, and, with the feet, are strong and black; the claws are long.

This bird is said to attain to a great age; and its plumage to be subject to change, from the influence of years and of climate. It is found in Iceland and Greenland entirely white.

The Raven was the constant attendant of Lewis and Clark's party, in their long and toilsome journey. During the winter, at Fort Mandan, they were observed in immense numbers, notwithstanding the cold was so excessive, that, on the seventeenth of December, 1804, the thermometer of Fahrenheit stood at 45° below 0.

Like the Crow, this species may be easily domesticated, and in that state would afford amusement, by its familiarity, frolics and sagacity. But such noisy and mischievous pets, in common with Parrots and Monkeys, are not held in high estimation in this quarter of the globe; and are generally overlooked for those universal favorites, which either gratify the eye by the neatness or brilliancy of their plumage, or delight the ear by the simplicity or variety of their song.

* Gass's Journal, p. 153.

† Charlevoix. Kalm. Hearne's Journey.

‡ Fernandez.

SPECIES II. *CORVUS CORONE*.*

C R O W.

[Plate XXXV. Fig. 3.]

THIS is perhaps the most generally known, and least beloved, of all our land birds; having neither melody of song, nor beauty of plumage, nor excellence of flesh, nor civility of manners, to recommend him: on the contrary, he is branded as a thief and a plunderer; a kind of black-coated vagabond, who hovers over the fields of the industrious, fattening on their labors; and by his voracity often blasting their expectations. Hated as he is by the farmer, watched and persecuted by almost every bearer of a gun, who all triumph in his destruction, had not Heaven bestowed on him intelligence and sagacity far beyond common, there is reason to believe that the whole tribe (in these parts at least) would long ago have ceased to exist.

The Crow is a constant attendant on agriculture, and a general inhabitant of the cultivated parts of North America. In the interior of the forest he is more rare, unless during the season of breeding. He is particularly attached to low flat corn countries, lying in the neighborhood of the sea or of large rivers; and more numerous in the northern than southern states, where Vultures abound, and with whom the Crows are unable to contend. A strong antipathy, it is also said, prevails between the Crow and the Raven, insomuch that, where the latter are numerous, the former rarely resides. Many of the first settlers of the Genesee country informed me, that, for a long time, Ravens were numerous with them, but no Crows; and even now the latter are seldom observed in that country. In travelling from Nashville to Natchez, a distance of four hundred and seventy miles, I saw few or no Crows, but Ravens frequently, and Vultures in great numbers.

The usual breeding time of the Crow, in Pennsylvania, is in March, April, and May, during which season they are dispersed over the woods in pairs, and roost in the neighborhood of the tree they have selected for their nest. About the middle of March they begin to build, generally choosing a high tree; though I have also known them prefer a middle sized cedar. One of their nests, now before me, is formed ex-

* We give the following synonyms: *Corvus corone*, LINN. *Syst.* ed. 10, i., p. 105.—GMEL. *Syst.* 1, p. 365.—LATH. *Ind. Orn.* p. 151.—TEMM. *Man. d'Orn.* i., p. 108.

ternally of sticks, wet moss, thin bark mixed with mossy earth, and lined with large quantities of horse hair, to the amount of more than half a pound, some cow hair, and some wool, forming a very soft and elastic bed. The eggs are four, of a pale green color, marked with numerous specks and blotches of olive.

During this interesting season, the male is extremely watchful, making frequent excursions of half a mile or so in circuit, to reconnoitre; and the instant he observes a person approaching, he gives the alarm, when both male and female retire to a distance, till the intruder has gone past. He also regularly carries food to his mate while she is sitting; occasionally relieves her; and when she returns, again resigns up his post. At this time also, as well as until the young are able to fly, they preserve uncommon silence, that their retreat may not be suspected.

It is in the month of May, and until the middle of June, that the Crow is most destructive to the corn-fields, digging up the newly planted grains of maize, pulling up by the roots those that have begun to vegetate, and thus frequently obliging the farmer to replant, or lose the benefit of the soil; and this sometimes twice, and even three times, occasioning a considerable additional expense and inequality of harvest. No mercy is now shown him. The myriads of worms, moles, mice, caterpillars, grubs and beetles, which he has destroyed, are altogether overlooked on these occasions. Detected in robbing the hens' nests, pulling up the corn, and killing the young chickens, he is considered as an outlaw, and sentenced to destruction. But the great difficulty is, how to put this sentence in execution. In vain the gunner skulks along the hedges and fences; his faithful sentinels, planted on some commanding point, raise the alarm, and disappoint vengeance of its object. The coast again clear, he returns once more in silence to finish the repast he had begun. Sometimes he approaches the farm-house by stealth, in search of young chickens, which he is in the habit of snatching off, when he can elude the vigilance of the mother hen, who often proves too formidable for him. A few days ago a Crow was observed eagerly attempting to seize some young chickens in an orchard, near the room where I write; but these clustering close round the hen, she resolutely defended them, drove the Crow into an apple-tree, whither she instantly pursued him with such spirit and intrepidity, that he was glad to make a speedy retreat, and abandon his design.

The Crow himself sometimes falls a prey to the superior strength and rapacity of the Great Owl, whose weapons of offence are by far the more formidable of the two.*

* "A few years ago," says an obliging correspondent. "I resided on the banks of the Hudson, about seven miles from the city of New York. Not far from the place of my residence was a pretty thick wood or swamp, in which great numbers of Crows, who used to cross the river from the opposite shore, were accustomed to

Towards the close of summer, the parent Crows, with their new families, forsaking their solitary lodgings, collect together, as if by previous agreement, when evening approaches. About an hour before sunset, they are first observed, flying somewhat in Indian file, in one direction, at a short height above the tops of the trees, silent and steady, keeping the general curvature of the ground, continuing to pass sometimes till after sunset, so that the whole line of march would extend for many miles. This circumstance, so familiar and picturesque, has not been overlooked by the poets, in their descriptions of a rural evening. Burns, in a single line, has finely sketched it

“The black’ning train of Crows to their repose.”

The most noted Crow-roost with which I am acquainted is near Newcastle, on an island in the Delaware. It is there known by the name of the *Pea-Patch*, and is a low flat alluvial spot, of a few acres,

roost. Returning homeward one afternoon from a shooting excursion, I had occasion to pass through this swamp. It was near sunset, and troops of Crows were flying in all directions over my head. While engaged in observing their flight, and endeavoring to select from among them an object to shoot at, my ears were suddenly assailed by the distressful cries of a Crow, who was evidently struggling under the talons of a merciless and rapacious enemy. I hastened to the spot whence the sound proceeded, and to my great surprise, found a Crow lying on the ground, just expiring, and, seated upon the body of the yet warm and bleeding quarry, a *large brown Owl*, who was beginning to make a meal of the unfortunate robber of corn-fields. Perceiving my approach, he forsook his prey with evident reluctance, and flew into a tree at a little distance, where he sat watching all my movements, alternately regarding, with longing eyes, the victim he had been forced to leave, and darting at me no very friendly looks, that seemed to reproach me for having deprived him of his expected regale. I confess that the scene before me was altogether novel and surprising. I am but little conversant with natural history; but I had always understood, that the depredations of the Owl were confined to the smaller birds, and animals of the lesser kind; such as mice, young rabbits, &c.; and that he obtained his prey rather by fraud and stratagem, than by open rapacity and violence. I was the more confirmed in this belief, from the recollection of a passage in *Macbeth*, which now forcibly recurred to my memory. The courtiers of King Duncan are recounting to each other the various prodigies that preceded his death, and one of them relates to his wondering auditors, that

‘An Eagle, tow’ring in his pride of place,
Was, by a *mousing Owl*, hawked at and killed.’

But to resume my relation. That the Owl was the murderer of the unfortunate Crow, there could be no doubt. No other bird of prey was in sight; I had not fired my gun since I entered the wood; nor heard any one else shoot: besides, the unequivocal situation in which I found the parties, would have been sufficient before any ‘twelve good men and true,’ or jury of Crows, to have convicted him of his guilt. It is proper to add, that I avenged the death of the hapless Crow, by a well-aimed shot at the felonious robber, that extended him breathless on the ground.”

elevated but a little above high-water mark, and covered with a thick growth of reeds. This appears to be the grand rendezvous, or headquarters of the greater part of the Crows within forty or fifty miles of the spot. It is entirely destitute of trees, the Crows alighting and nestling among the reeds, which by these means are broken down and matted together. The noise created by those multitudes, both in their evening assembly, and re-ascension in the morning; and the depredations they commit in the immediate neighborhood of this great resort, are almost incredible. Whole fields of corn are sometimes laid waste, by thousands alighting on it at once, with appetites whetted by the fast of the preceding night; and the utmost vigilance is unavailing to prevent, at least, a partial destruction of this their favorite grain. Like the stragglers of an immense, undisciplined, and rapacious army, they spread themselves over the fields, to plunder and destroy wherever they alight. It is here that the character of the Crow is universally execrated; and to say to the man who has lost his crop of corn by these birds, that Crows are exceedingly useful for destroying vermin, would be as consolatory as to tell him who had just lost his house and furniture by the flames, that fires are excellent for destroying bugs.

The strong attachment of the Crows to this spot may be illustrated by the following circumstance. Some years ago, a sudden and violent north-east storm came on during the night, and the tide rising to an uncommon height inundated the whole island. The darkness of the night, the suddenness and violence of the storm, and the incessant torrents of rain that fell, it is supposed, so intimidated the Crows, that they did not attempt to escape, and almost all perished. Thousands of them were next day seen floating in the river; and the wind shifting to the north-west, drove their dead bodies to the Jersey side, where for miles they blackened the whole shore.

This disaster, however, seems long ago to have been repaired; for they now congregate on the *Pea-Patch* in as immense multitudes as ever.*

So universal is the hatred to Crows, that few states, either here or

* The following is extracted from a late number of a newspaper printed in that neighborhood: "The farmers of Red Lion Hundred held a meeting at the village of St. Georges, in the state of Delaware, on Monday, the 6th inst., to receive proposals of John Deputy, on a plan for banishing or destroying the Crows. Mr. Deputy's plan, being heard and considered, was approved, and a committee appointed to contract with him, and to procure the necessary funds to carry the same into effect. Mr. Deputy proposes that for five hundred dollars he will engage to kill or banish the Crows from their roost on the *Pea-Patch*, and give security to return the money on failure.

"The sum of five hundred dollars being thus required, the committee beg leave to address the farmers and others of Newcastle county, and elsewhere, on the subject."

in Europe, have neglected to offer rewards for their destruction. In the United States they have been repeatedly ranked in our laws with the wolves, the panthers, foxes and squirrels, and a proportionable premium offered for their heads, to be paid by any justice of the peace to whom they are delivered. On all these accounts various modes have been invented for capturing them. They have been taken in clap-nets commonly used for taking pigeons; two or three live Crows being previously procured as decoys, or as they are called *Stool-crows*. Corn has been steeped in a strong decoction of hellebore, which when eaten by them produces giddiness, and finally, it is said, death. Pieces of paper, formed into the shape of a hollow cone, besmeared within with birdlime, and a grain or two of corn dropped on the bottom, have also been adopted. Numbers of these being placed on the ground, where corn has been planted, the Crows attempting to reach the grains are instantly hoodwinked, fly directly upwards to a great height; but generally descend near the spot whence they rose, and are easily taken. The reeds of their roosting places are sometimes set on fire during a dark night, and the gunners having previously posted themselves around, the Crows rise in great uproar, and amidst the general consternation, by the light of the burnings, hundreds of them are shot down.

Crows have been employed to catch Crows, by the following stratagem. A live crow is pinned by the wings down to the ground on his back, by means of two sharp, forked sticks. Thus situated, his cries are loud and incessant, particularly if any other Crows are within view. These sweeping down about him, are instantly grappled by the prostrate prisoner, by the same instinctive impulse that urges a drowning person to grasp at everything within his reach. Having disengaged the game from his clutches, the trap is again ready for another experiment; and by pinning down each captive, successively, as soon as taken, in a short time you will probably have a large flock screaming above you, in concert with the outrageous prisoners below. Many farmers, however, are content with hanging up the skins, or dead carcasses, of Crows, in their corn-fields by way of terrorem; others depend altogether on the gun, keeping one of their people supplied with ammunition, and constantly on the lookout. In hard winters, the Crows suffer severely, so that they have been observed to fall down in the fields, and on the roads, exhausted with cold and hunger. In one of these winters, and during a long-continued deep snow, more than six hundred Crows were shot on the carcass of a dead horse, which was placed at a proper distance from the stable, from a hole of which the discharges were made. The premiums awarded for these, with the price paid for the quills, produced nearly as much as the original value of the horse, besides, as the man himself assured me, saving feathers sufficient for filling a bed.

The Crow is easily raised and domesticated; and it is only when thus

rendered unsuspecting of, and placed on terms of familiarity with, man, that the true traits of his genius, and native disposition, fully develop themselves. In this state he soon learns to distinguish all the members of the family; flies towards the gate, screaming at the approach of a stranger; learns to open the door by alighting on the latch; attends regularly at the stated hours of dinner and breakfast; which he appears punctually to recollect; is extremely noisy and loquacious; imitates the sound of various words, pretty distinctly; is a great thief and hoarder of curiosities, hiding in holes, corners and crevices, every loose article he can carry off, particularly small pieces of metal, corn, bread, and food of all kinds; is fond of the society of his master, and will know him even after a long absence; of which the following is a remarkable instance, and may be relied on as a fact. A very worthy gentleman, now living in the Genesee country, but who, at the time alluded to, resided on the Delaware, a few miles below Easton, had raised a Crow, with whose tricks and society he used frequently to amuse himself. This Crow lived long in the family; but at length disappeared, having, as was then supposed, been shot by some vagrant gunner, or destroyed by accident. About eleven months after this, as the gentleman, one morning, in company with several others, was standing on the river shore, a number of Crows happening to pass by, one of them left the flock, and flying directly towards the company, alighted on the gentleman's shoulder, and began to gabble away with great volubility, as one long-absent friend naturally enough does on meeting with another. On recovering from his surprise, the gentleman instantly recognised his old acquaintance; and endeavored by several civil but sly manœuvres to lay hold of him; but the Crow, not altogether relishing quite so much familiarity, having now had a taste of the sweets of liberty, cautiously eluded all his attempts; and suddenly glancing his eye on his distant companions, mounted in the air after them, soon overtook and mingled with them, and was never afterward seen to return.

The habits of the Crow, in his native state, are so generally known, as to require little further illustration. His watchfulness, and jealous sagacity in distinguishing a person with a gun, are notorious to every one. In spring, when he makes his appearance among the groves and low thickets, the whole feathered songsters are instantly alarmed, well knowing the depredations and murders he commits on their nests, eggs and young. Few of them, however, have the courage to attack him, except the King-bird, who on these occasions teases and pursues him from place to place, diving on his back while high in the air, and harassing him for a great distance. A single pair of these noble-spirited birds, whose nest was built near, have been known to protect a whole field of corn from the depredations of the Crows, not permitting one to approach it.

The Crow is eighteen inches and a half long, and three feet two inches in extent; the general color is a shining glossy blue black, with purplish reflections; the throat and lower parts are less glossy; the bill and legs a shining black, the former two inches and a quarter long, very strong, and covered at the base with thick tufts of recumbent feathers; the wings, when shut, reach within an inch and a quarter of the tip of the tail, which is rounded; fourth primary the longest; secondaries scalloped at the ends, and minutely pointed, by the prolongation of the shaft; iris dark hazel.

The above description agrees so nearly with the European species as to satisfy me that they are the same; though the voice of ours is said to be less harsh, not unlike the barking of a small spaniel; the pointedness of the ends of the tail feathers, mentioned by European naturalists, and occasioned by the extension of the shafts, is rarely observed in the present species, though always very observable in the secondaries.

The female differs from the male in being more dull colored, and rather deficient in the glossy and purplish tints and reflections. The difference, however, is not great.

Besides grain, insects, and carrion, they feed on frogs, tadpoles, small fish, lizards, and shell-fish; with the latter they frequently mount to a great height, dropping them on the rocks below, and descending after them to pick up the contents. The same habit is observable in the Gull, the Raven, and Sea-side Crow. Many other aquatic insects, as well as marine plants, furnish them with food; which accounts for their being so generally found, and so numerous, on the sea-shore, and along the banks of our large rivers.

SPECIES III. *CORVUS COLUMBIANUS*.

CLARK'S CROW.

[Plate XX. Fig. 2.]

THIS species resembles, a little, the Jackdaw of Europe (*Corvus monedula*); but is remarkable for its formidable claws, which approach to those of the *Falco* genus; and would seem to intimate, that its food consists of living animals, for whose destruction these weapons must be necessary. In conversation with different individuals of Lewis and Clark's party, I understood that this bird inhabits the shores of the Columbia, and the adjacent country, in great numbers, frequenting the rivers and seashore, probably feeding on fish; and that it has all the gregarious and noisy habits of the European species, several of the party supposing it to be the same.

The figure in the plate was drawn with particular care, after a minute examination and measurement of the only preserved skin that was saved.

This bird measures thirteen inches in length; the wings, the two middle tail feathers, and the interior vanes of the next (except at the tip) are black, glossed with steel blue; all the secondaries, except the three next the body, are white for an inch at their extremities, forming a large spot of white on that part, when the wing is shut; the tail is rounded; yet the two middle feathers are somewhat shorter than those adjoining; all the rest are pure white, except as already described; the general color of the head, neck, and body, above and below, is a light silky drab, darkening almost to a dove color on the breast and belly; vent white; claws black, large, and hooked, particularly the middle and hind-claws; legs also black; bill a dark horn color; iris of the eye unknown.

In the state of Georgia, and several parts of the Mississippi Territory, I discovered a Crow,* not hitherto taken notice of by naturalists, rather larger than the present species; but much resembling it in the form and length of its wings, in its tail, and particularly its claws. This bird is a constant attendant along the borders of streams and stagnating ponds, feeding on small fish and lizards, which I have many times seen him seize as he swept along the surface. A well preserved specimen of this bird was presented to Mr. Peale. It is highly probable that, with these external resemblances, the habits of both may be nearly alike.

* The Crow above alluded to is the Fish-Crow. See the next article.

SPECIES IV. *CORVUS OSSIFRAGUS*.

F I S H - C R O W.

[Plate XXXVII. Fig. 2.]

THIS is another roving inhabitant of our coasts, ponds, and river shores; though a much less distinguished one than the preceding,* this being the first time, as far as I can learn, that he has ever been introduced to the notice of the world.

I first met with this species on the coast of Georgia, and observed that they regularly retired to the interior as evening approached, and came down to the shores of the river Savannah, by the first appearance of day. Their voice first attracted my notice, being very different from that of the common Crow, more hoarse and guttural, uttered as if something stuck in their throat, and varied into several modulations as they flew along. Their manner of flying was also unlike the others, as they frequently sailed about, without flapping the wings, something in the manner of the Raven; and I soon perceived that their food, and their mode of procuring it, were also both different; their favorite haunts being about the banks of the river, along which they usually sailed, dexterously snatching up, with their claws, dead fish, or other garbage, that floated on the surface. At the country seat of Stephen Elliot, Esq., near the Ogeechee river, I took notice of these Crows frequently perching on the backs of the cattle, like the Magpie and Jackdaw of Britain; but never mingling with the common Crows; and differing from them in this particular, that the latter generally retire to the shore, the reeds and marshes, to roost; while the Fish-Crow, always a little before sunset, seeks the interior high woods to repose in.

In my journey through the Mississippi Territory, last year, I resided for some time at the seat of my hospitable friend, Dr. Samuel Brown, a few miles from Fort Adams, on the Mississippi. In my various excursions there among the lofty fragrance-breathing magnolia woods, and magnificent scenery, that adorn the luxuriant face of nature in those southern regions, this species of Crow frequently made its appearance, distinguished by the same voice and habits it had in Georgia. There is in many of the ponds there, a singular kind of lizard, that swims about with its head above the surface, making a loud sound, not unlike the

* The Fish-Hawk, figured in the same plate, and which immediately precedes the Fish-Crow, in the text of the original edition.

harsh jarring of a door. These the Crow now before us would frequently seize with his claws, as he flew along the surface, and retire to the summit of a dead tree to enjoy his repast. Here I also observed him a pretty constant attendant at the pens, where the cows were usually milked, and much less shy, less suspicious, and more solitary, than the common Crow. In the county of Cape May, New Jersey, I again met with these Crows, particularly along Egg Harbor river; and latterly on the Schuylkill and Delaware, near Philadelphia, during the season of shad and herring fishing, viz., from the middle of March till the beginning of June. A small party of these Crows, during this period, regularly passed Bartram's gardens, to the high woods, to roost, every evening a little before sunset, and as regularly returned at or before sunrise every morning, directing their course towards the river. The fishermen along these rivers also inform me, that they have particularly remarked this Crow, by his croaking voice, and his fondness for fish; almost always hovering about their fishing places, to glean up the refuse. Of their manner of breeding I can only say, that they separate into pairs, and build in tall trees, near the sea or river shore; one of their nests having been built this season in a piece of tall woods, near Mr. Beasley's, at Great Egg Harbor. The male of this nest furnished me with the figure in the plate, which was drawn of full size, and afterwards reduced to one-third the size of life, to correspond with the rest of the figures in the same plate. From the circumstance of six or seven being usually seen here together, in the month of July, it is probable that they have at least four or five young at a time.

I can find no description of this species by any former writer. Mr. Bartram mentions a bird of this tribe, which he calls the *Great Seaside Crow*; but the present species is considerably inferior in size to the common Crow; and having myself seen and examined it in so many, and remotely situated, parts of the country, and found it in all these places alike, I have no hesitation in pronouncing it to be a new and hitherto undescribed species.

The Fish-Crow is sixteen inches long, and thirty-three in extent; black all over, with reflections of steel-blue and purple; the chin is bare of feathers around the base of the lower mandible;* upper mandible notched near the tip, the edges of both turned inwards about the middle; eye very small, placed near the corner of the mouth, and of a dark hazel color; recumbent hairs or bristles large and long; ear feathers prominent; first primary little more than half the length of the second, fourth

* This must have been an accidental circumstance, as I have seen specimens, the chin of which was entirely covered. In the month of April, I shot a fine male, on the Delaware, *seventeen* inches long, thirty-three broad. The chin covered. This species is greatly infested with lice, insomuch that when one handles them, one gets covered with these disagreeable vermin.—*G. Ord.*

the longest; wings, when shut, reach within two inches of the tip of the tail; tail rounded, and seven inches long from its insertion; thighs very long; legs stout; claws sharp, long and hooked, hind one the largest, all jet black. Male and female much alike.

I would beg leave to recommend to the watchful farmers of the United States, that in their honest indignation against the common Crow, they would spare the present species, and not shower destruction, indiscriminately, on their black friends and enemies; at least on those who *sometimes* plunder them, and those who never molest or injure their property. ³

SPECIES V. *CORVUS PICA*.

MAGPIE.

[Plate XXXV. Fig. 2.]

Arct. Zool. No. 136.—*LATH. Syn.* I., 392.—*BUFF.* III., 85. *Pl. Enl.* 488.*

THIS bird is much better known in Europe than in this country, where it has not been long discovered; although it is now found to inhabit a wide extent of territory, and in great numbers. The drawing was taken from a very beautiful specimen, sent from the Mandan nation, on the Missouri, to Mr. Jefferson, and by that gentleman to Mr. Peale of this city, in whose Museum it lived for several months, and where I had an opportunity of examining it. On carefully comparing it with the European Magpie in the same collection, no material difference could be perceived. The figure in the plate is reduced to exactly half the size of life.

This bird unites in its character courage and cunning, turbulence, and rapacity. Not inelegantly formed, and distinguished by gay as well as splendid plumage, he has long been noted in those countries where he commonly resides, and his habits and manners are there familiarly known. He is particularly pernicious to plantations of young oaks, tearing up the acorns; and also to birds, destroying great numbers of their eggs and young, even young chickens, partridges, grouse, and pheasants. It is perhaps on this last account that the whole vengeance of the game laws has lately been let loose upon him, in some parts of

* We add the following synonymes:—*Corvus pica*, LINN. *Syst.* ed. 10, I., p. 106.—GMEL. *Syst.* I., p. 373.—LATH. *Ind. Orn.* p. 162.—*La Pie*, BRISS. *Orn.* vol. II., p. 35.—TEMM. *Man. d' Orn.* I., p. 113.

Britain; as appears by accounts from that quarter, where premiums, it is said, are offered for his head, as an arch poacher; and penalties inflicted on all those who permit him to breed on their premises. Under the lash of such rigorous persecution, a few years will probably exterminate the whole tribe from the island. He is also destructive to gardens and orchards; is noisy and restless, almost constantly flying from place to place; alights on the backs of the cattle, to rid them of the larvæ that fester in the skin; is content with carrion when nothing better offers; eats various kinds of vegetables, and devours greedily grain, worms, and insects of almost every description. When domesticated, he is easily taught to imitate the human voice, and to articulate words pretty distinctly; has all the pilfering habits of his tribe, filling every chink, nook, and crevice with whatever he can carry off; is subject to the epilepsy, or some similar disorder; and is, on the whole, a crafty, restless, and noisy bird.

He generally selects a tall tree adjoining the farm-house, for his nest, which is placed among the highest branches; this is large, composed outwardly of sticks, roots, turf, and dry weeds, and well lined with wool, cow hair, and feathers; the whole is surrounded, roofed, and barricaded with thorns, leaving only a narrow entrance. The eggs are usually five, of a greenish color, marked with numerous black or dusky spots. In the northern parts of Europe, he migrates at the commencement of winter.

In this country the Magpie was first taken notice of at the factories or trading houses on Hudson's Bay, where the Indians used sometimes to bring it in, and gave it the name of *Heart-bird*, for what reason is uncertain. It appears, however, to be rather rare in that quarter. These circumstances are taken notice of by Mr. Pennant and other British naturalists.

In 1804, the exploring party under the command of Lewis and Clark, on their route to the Pacific Ocean across the continent, first met with the Magpie somewhere near the great bend of the Missouri, and found that the number of these birds increased as they advanced. Here also the Blue Jay disappeared; as if the territorial boundaries and jurisdiction of these two noisy and voracious families of the same tribe had been mutually agreed on, and distinctly settled. But the Magpie was found to be far more daring than the Jay, dashing into their very tents, and carrying off the meat from the dishes. One of the hunters, who accompanied the expedition, informed me that they frequently attended him while he was engaged in skinning and cleaning the carcass of the deer, bear, or buffalo he had killed, often seizing the meat that hung within a foot or two of his head. On the shores of the Kooskoos-ke river, on the west side of the great range of the Rocky Mountains, they were found to be equally numerous.

It is highly probable that those vast plains or prairies, abounding with game and cattle, frequently killed for the mere hides, tallow, or even marrow-bones, may be one great inducement for the residency of these birds, so fond of flesh and carrion. Even the rigorous severity of winter in the high regions along the head waters of Rio du Nord, the Arkansas and Red river, seems insufficient to force them from those favorite haunts; though it appears to increase their natural voracity to a very uncommon degree. Pike relates, that, in the month of December, in the neighborhood of the North Mountain, N. lat. 41° , W. long. 34° , Reaumur's thermometer standing at 17° below 0, these birds were seen in great numbers. "Our horses," says he, "were obliged to scrape the snow away to obtain their miserable pittance; and to increase their misfortunes, the poor animals were attacked by the Magpies, who, attracted by the scent of their sore backs, alighted on them, and in defiance of their wincing and kicking, picked many places quite raw. The difficulty of procuring food rendering those birds so bold as to light on our men's arms, and eat meat out of their hands."*

The Magpie is eighteen inches in length; the head, neck, upper part of the breast and back, are a deep velvety black; primaries brownish black, streaked along their inner vanes with white; secondaries rich purplish blue; greater coverts green blue; scapulars, lower part of the breast and belly, white; thighs and vent black; tail long, the two exterior feathers scarcely half the length of the longest, the others increasing to the two middle ones, which taper towards their extremities. The color of this part of the plumage is very splendid, being glossy green, dashed with blue and bright purple; this last color bounds the green; nostrils covered with a thick tuft of recumbent hairs, as are also the sides of the mouth; bill, legs and feet, glossy black. The female differs only in the less brilliancy of her plumage.

* Pike's Journal, p. 170.

SPECIES VI. *CORVUS CRISTATUS*.

BLUE JAY.

[Plate I. Fig. 1.]

LINN, *Syst.* I., p. 106, No. 8, ed. 10.—*Garrulus canadensis cœruleus*, BRISS. II., p. 55.—*Pica glandaria cristata*, KLEIN, p. 61, 3.—*Le Geai bleu de l'Amerique Septentrionale*, BUFF. III., p. 120. *Pl. Enl.* 529.—*Blue Jay*, CATESB. *Car.* I., 15.—EDW. 239.—*Arct. Zool.* II., No. 138.—LATH. *Syn.* I., p. 386, 20.—BARTRAM, p. 290.

THIS elegant bird, which, as far as I can learn, is peculiar to North America, is distinguished as a kind of beau among the feathered tenants of our woods, by the brilliancy of his dress; and like most other coxcombs, makes himself still more conspicuous by his loquacity, and the oddness of his tones and gestures. The Jay measures eleven inches in length; the head is ornamented with a crest of light blue or purple feathers, which he can elevate or depress at pleasure; a narrow line of black runs along the frontlet, rising on each side higher than the eye, but not passing *over* it, as Catesby has represented, and as Pennant and many others have described it; back and upper part of the neck a fine light purple, in which the blue predominates; a collar of black proceeding from the hind-head, passes with a graceful curve down each side of the neck, to the upper part of the breast, where it forms a crescent; chin, cheeks, throat and belly, white, the three former slightly tinged with blue; greater wing coverts a rich blue; exterior sides of the primaries light blue, those of the secondaries a deep purple, except the three feathers next the body, which are of a splendid light blue; all these, except the primaries, are beautifully barred with crescents of black, and tipped with white; the interior sides of the wing feathers are dusky black; tail long and cuneiform, composed of twelve feathers of a glossy light blue, marked at half inches with transverse curves of black, each feather being tipped with white, except the two middle ones, which deepen into a dark purple at the extremities. Breast and sides under the wings a dirty white, faintly stained with purple; inside of the mouth, the tongue, bill, legs, and claws, black; iris of the eye hazel.

The Blue Jay is an almost universal inhabitant of the woods, frequenting the thickest settlements, as well as the deepest recesses of the forest, where his squalling voice often alarms the deer, to the disappointment and mortification of the hunter; one of whom informed me, that he made it a point, in summer, to kill every Jay he could meet

with. In the charming season of spring, when every thicket pours forth harmony, the part performed by the Jay always catches the ear. He appears to be, among his fellow-musicians what the trumpeter is in a band, some of his notes having no distant resemblance to the tones of that instrument. These he has the faculty of changing through a great variety of modulations, according to the particular humor he happens to be in. When disposed for ridicule, there is scarce a bird whose peculiarities of song he cannot tune his notes to. When engaged in the blandishments of love, they resemble the soft chatterings of a duck; and while he nestles among the thick branches of the cedar, are scarce heard at a few paces distant; but no sooner does he discover your approach, than he sets up a sudden and vehement outcry, flying off, and screaming with all his might, as if he called the whole feathered tribes of the neighborhood to witness some outrageous usage he had received. When he hops undisturbed among the high branches of the oak and hickory, they become soft and musical; and his calls of the female, a stranger would readily mistake for the repeated creakings of an ungreased wheelbarrow. All these he accompanies with various nods, jerks, and other gesticulations, for which the whole tribe of Jays are so remarkable, that, with some other peculiarities, they might have very well justified the great Swedish naturalist in forming them into a separate genus by themselves.

The Blue Jay builds a large nest, frequently in the cedar, sometimes in an apple-tree, lines it with dry fibrous roots, and lays five eggs, of a dull olive, spotted with brown. The male is particularly careful of not being heard near the place, making his visits as silently and secretly as possible. His favorite food is chestnuts, acorns, and Indian corn. He occasionally feeds on bugs and caterpillars, and sometimes pays a plundering visit to the orchard, cherry-rows, and potato-patch; and has been known, in times of scarcity, to venture into the barn, through openings between the weather-boards. In these cases he is extremely active and silent, and if surprised in the fact makes his escape with precipitation, but without noise, as if conscious of his criminality.

Of all birds he is the most bitter enemy to the Owl. No sooner has he discovered the retreat of one of these, than he summons the whole feathered fraternity to his assistance, who surround the glimmering *solitaire*, and attack him from all sides, raising such a shout, as may be heard, in a still day, more than half a mile off. When in my hunting excursions I have passed near this scene of tumult, I have imagined to myself that I heard the insulting party venting their respective charges with all the virulency of a Billingsgate mob; the owl, meanwhile, returning every compliment with a broad goggling stare. The war becomes louder and louder, and the Owl, at length forced to betake

himself to flight, is followed by the whole train of his persecutors, until driven beyond the boundaries of their jurisdiction.

But the Blue Jay himself is not guiltless of similar depredations with the Owl, and becomes, in his turn, the very tyrant he detested, when he sneaks through the woods, as he frequently does, and among the thickets and hedge-rows, plundering every nest he can find of its eggs, tearing up the callow young by piecemeal, and spreading alarm and sorrow around him. The cries of the distressed parents soon bring together a number of interested spectators (for birds, in such circumstances, seem truly to sympathize with each other), and he is sometimes attacked with such spirit, as to be under the necessity of making a speedy retreat.

He will sometimes assault small birds, with the intention of killing and devouring them; an instance of which I myself once witnessed, over a piece of woods, near the borders of Schuylkill; where I saw him engaged for more than five minutes pursuing what I took to be a species of *Motacilla*, wheeling, darting, and doubling in the air, and at last, to my great satisfaction, got disappointed, by the escape of his intended prey. In times of great extremity, when his hoard or magazine is frozen up, buried in snow, or perhaps exhausted, he becomes very voracious, and will make a meal of whatever carrion or other animal substance comes in the way; and has been found regaling himself on the bowels of a Robin, in less than five minutes after it was shot.

There are, however, individual exceptions to this general character for plunder and outrage, a proneness for which is probably often occasioned by the wants and irritations of necessity. A Blue Jay, which I have kept for some time, and with whom I am on terms of familiarity, is in reality a very notable example of mildness of disposition, and sociability of manners. An accident in the woods first put me in possession of this bird, while in full plumage, and in high health and spirits; I carried him home with me, and put him into a cage already occupied by a Gold-winged Woodpecker, where he was saluted with such rudeness, and received such a drubbing from the lord of the manor, for entering his premises, that, to save his life, I was obliged to take him out again. I then put him into another cage, where the only tenant was a female Orchard Oriole. She also put on airs of alarm, as if she considered herself endangered and insulted by the intrusion; the Jay, meanwhile, sat mute and motionless on the bottom of the cage, either dubious of his own situation, or willing to allow time for the fears of his neighbor to subside. Accordingly, in a few minutes, after displaying various threatening gestures (like some of those Indians we read of, in their first interviews with the whites), she began to make her approaches, but with great circumspection, and readiness for retreat. Seeing, however, the Jay begin to pick up some crumbs of broken chestnuts, in a

humble and peaceable way, she also descended, and began to do the same; but at the slightest motion of her new guest, wheeled round and put herself on the defensive. All this ceremonious jealousy vanished before evening, and they now roost together, feed, and play together, in perfect harmony and good humor. When the Jay goes to drink, his messmate very impudently jumps into the water to wash herself, throwing the water in showers over her companion, who bears it all patiently; venturing now and then to take a sip between every splash, without betraying the smallest token of irritation. On the contrary, he seems to take pleasure in his little fellow-prisoner, allowing her to pick (which she does very gently) about his whiskers, and to clean his claws from the minute fragments of chestnuts which happen to adhere to them. This attachment on the one part, and mild condescension on the other, may, perhaps, be partly the effect of mutual misfortunes, which are found not only to knit mankind, but many species of inferior animals, more closely together; and shows that the disposition of the Blue Jay may be humanized, and rendered susceptible of affectionate impressions, even for those birds, which, in a state of nature, he would have no hesitation in making a meal of.

He is not only bold and vociferous, but possesses a considerable talent for mimicry, and seems to enjoy great satisfaction in mocking and teasing other birds, particularly the little hawk (*F. sparverius*), imitating his cry wherever he sees him, and squealing out as if caught; this soon brings a number of his own tribe around him, who all join in the frolic, darting about the hawk, and feigning the cries of a bird sorely wounded, and already under the clutches of its devourer; while others lie concealed in bushes, ready to second their associates in the attack. But this ludicrous farce often terminates tragically. The hawk singling out one of the most insolent and provoking, sweeps upon him in an unguarded moment, and offers him up a sacrifice to his hunger and resentment. In an instant the tune is changed; all their buffoonery vanishes, and loud and incessant screams proclaim their disaster.

Wherever the Jay has had the advantage of education from man, he has not only shown himself an apt scholar, but his suavity of manners seems equalled only by his art and contrivances; though it must be confessed that his itch for thieving keeps pace with all his other acquirements. Dr. Mease, on the authority of Colonel Postell, of South Carolina, informs me, that a Blue Jay, which was brought up in the family of the latter gentleman, had all the tricks and loquacity of a parrot; pilfered everything he could conveniently carry off, and hid them in holes and crevices; answered to his name with great sociability, when called on; could articulate a number of words pretty distinctly; and when he heard any uncommon noise or loud talking, seemed impatient to contribute his share to the general festivity (as he probably

thought it), by a display of all the oratorical powers he was possessed of.

Mr. Bartram relates an instance of the Jay's sagacity, worthy of remark. "Having caught a Jay in the winter season," says he, "I turned him loose in the green-house, and fed him with corn (zea, maize), the heart of which they are very fond of. This grain being ripe and hard, the bird at first found a difficulty in breaking it, as it would start from his bill when he struck it. After looking about, and as if considering for a moment, he picked up his grain, carried and placed it close up in a corner on the shelf, between the wall and a plant-box, where being confined on three sides he soon effected his purpose, and continued afterwards to make use of this same practical expedient. The Jay," continues this judicious observer, "is one of the most useful agents in the economy of nature, for disseminating forest trees, and other ruciferous and hard-seeded vegetables on which they feed. Their chief employment during the autumnal season is foraging to supply their winter stores. In performing this necessary duty, they drop abundance of seed in their flight over fields, hedges, and by-fences, where they alight to deposit them in the post holes, &c. It is remarkable what numbers of young trees rise up in fields and pastures after a wet winter and spring. These birds alone are capable, in a few years' time, to replant all the cleared lands."*

The Blue Jays seldom associate in any considerable numbers, except in the months of September and October, when they hover about in scattered parties of from forty to fifty, visiting the oaks, in search of their favorite acorns. At this season they are less shy than usual; and keep chattering to each other in a variety of strange and querulous notes. I have counted fifty-three, but never more, at one time; and these generally following each other in straggling irregularity from one range of woods to another. Yet we are told by the learned Dr. Latham, and his statement has been copied into many respectable European publications, that the Blue Jays of North America "often unite into flocks of twenty thousand at least! which alighting on a field of ten or twelve acres, soon lay waste the whole."† If this were really so, these birds would justly deserve the character he gives them, of being the most destructive species in America. But I will venture the assertion, that the tribe *Oriolus phæniceus*, or red-winged Blackbirds, in the environs of the river Delaware alone, devour and destroy more Indian corn than the whole Blue Jays of North America. As to their assembling in such immense multitudes, it may be sufficient to observe, that a flock of

* Letter of Mr. William Bartram to the Author.

† Synopsis of Birds, vol. i., p. 387. See also Encyclopedia Britannica, art. Corvus.

Blue Jays of twenty thousand, would be as extraordinary an appearance in America, as the same number of Magpies or Cuckoos would be in Britain.

It has been frequently said, that numbers of birds are common to the United States and Europe; at present, however, I am not certain of many. Comparing the best descriptions and delineations of the European ones with those of our native birds, said to be of the same species, either the former are very erroneous, or the difference of plumage and habits in the latter justify us in considering a great proportion of them to be really distinct species. Be this however as it may, the Blue Jay appears to belong exclusively to North America. I cannot find it mentioned by any writer or traveller among the birds of Guiana, Brazil, or any other part of South America. It is equally unknown in Africa. In Europe, and even in the eastern parts of Asia, it is never seen in its wild state. To ascertain the exact limits of its native regions would be difficult. These, it is highly probable, will be found to be bounded by the extremities of the temperate zone. Dr. Latham has indeed asserted, that the Blue Jay of America is not found farther north than the town of Albany.* This, however, is a mistake. They are common in the Eastern States, and are mentioned by Dr. Belknap in his enumeration of the birds of New Hampshire.† They are also natives of Newfoundland. I myself have seen them in Upper Canada. Blue Jays and Yellow-birds were found by Mr. McKenzie, when on his journey across the continent, at the head waters of the Unjigah, or Peace river, in N. lat. 54°, W. long. 121°, on the west side of the great range of Stony Mountains.‡ Steller, who in 1741 accompanied Captain Behring in his expedition for the discovery of the north-west coast of America, and who wrote the journal of the voyage, relates, that he himself went on shore near Cape St. Elias, in N. lat. 58° 28' W., long. 141° 46', according to his estimation, where he observed several species of birds *not known in Siberia*; and one, in particular, described by Catesby under the name of the Blue Jay.§ Mr. William Bartram informs me, that they are numerous in the peninsula of Florida, and that he also found them at Natchez, on the Mississippi. Captains Lewis and Clark, and their intrepid companions, in their memorable expedition across the continent of North America to the Pacific Ocean, continued to see Blue Jays for six hundred miles up the Missouri.|| From these accounts it follows, that this species occupies, generally or par-

* Synopsis, vol. i., p. 387.

† Hist. N. Hamp. vol. iii., p. 163.

‡ Voyage from Montreal, &c., p. 216, quarto, Lond. 1801.

§ See Steller's Journal apud Pallas.

|| This fact I had from Captain Lewis.

tially, an extent of country stretching upwards of seventy degrees from east to west, and more than thirty degrees from north to south; though, from local circumstances, there may be intermediate tracts in this immense range, which they seldom visit.

SPECIES VII. *CORVUS CANADENSIS*.

CANADA JAY.

[Plate XXI. Fig. 1.]

LINN. *Syst.* 158.—*Cinereous Crow*, *Arct. Zool.* p. 248, No. 137.—LATHAM, I., 389.—*Le Geay Brun de Canada*, BRISSON, II., 54.—BUFFON, III. 117.

WERE I to adopt the theoretical reasoning of a celebrated French naturalist, I might pronounce this bird to be a debased descendant from the common Blue Jay of the United States, degenerated by the influence of the bleak and chilling regions of Canada; or perhaps a *spurious* production, between the Blue Jay and the Cat-bird; or what would be more congenial to the Count's ideas, trace its degradation to the circumstance of migrating, some thousand years ago, from the genial shores of Europe, where nothing like degeneracy or degradation ever takes place among any of God's creatures. I shall, however, on the present occasion, content myself with stating a few particulars better supported by facts, and more consonant to the plain homespun of common sense.

This species inhabits the country extending from Hudson's Bay, and probably farther north, to the river St. Lawrence; also in winter the inland parts of the district of Maine, and northern tracts of the states of Vermont and New York. When the season is very severe, with deep snow, they sometimes advance farther south; but generally return northward as the weather becomes more mild.

The character given of this bird by the people of those parts of the country where it inhabits, is, that it feeds on black moss, worms, and even flesh;—when near habitations or tents, pilfers everything it can come at—is bold, and comes even into the tent to eat meat out of the dishes; watches the hunters while baiting their traps for martens, and devours the bait as soon as their backs are turned; that they breed early in spring, building their nests on pine trees, forming them of sticks and grass, and lay blue eggs; that they have two, rarely three young at a time, which are at first quite black, and continue so for some time; that they fly in pairs; lay up hoards of berries in hollow trees; are seldom seen in January, unless near houses; are a kind of Mock-bird; and when caught pine away, though their appetite never fails them;

notwithstanding all which ingenuity and good qualities, they are, as we are informed, detested by the natives."*

The only individuals of this species that I ever met with in the United States were on the shores of the Mohawk, a short way above the Little Falls. It was about the last of November, and the ground deeply covered with snow. There were three or four in company, or within a small distance of each other, flitting leisurely along the road side, keeping up a kind of low chattering with one another, and seemed nowise apprehensive at my approach. I soon secured the whole; from the best of which the drawing in the plate was carefully made. On dissection I found their stomachs occupied by a few spiders and the aureliæ of some insects. I could perceive no difference between the plumage of the male and female.

The Canada Jay is eleven inches long, and fifteen in extent; back, wings, and tail, a dull leaden gray, the latter long, cuneiform, and tipped with dirty white; interior vanes of the wings brown, and also partly tipped with white; plumage of the head loose and prominent; the forehead and feathers covering the nostril, as well as the whole lower parts, a dirty brownish white, which also passes round the bottom of the neck like a collar; part of the crown and hind-head black; bill and legs also black; eye dark hazel. The whole plumage on the back is long, loose, unwebbed, and in great abundance, as if to protect it from the rigors of the regions it inhabits.

A gentleman of observation, who resided for many years near the North river, not far from Hudson, in the state of New York, informs me, that he has particularly observed this bird to arrive there at the commencement of cold weather—he has often remarked its solitary habits; it seemed to seek the most unfrequented shaded retreats, keeping almost constantly on the ground, yet would sometimes, towards evening, mount to the top of a small tree, and repeat its notes (which a little resemble those of the Baltimore) for a quarter of an hour together; and this it generally did immediately before snow, or falling weather.

* HEARNE'S Journey, p. 405.

GENUS XV. ORIOLUS.*

SPECIES I. *ORIOLUS BALTIMORUS*†

BALTIMORE ORIOLE.

[Plate I. Fig. 3—Male.]

LINN. *Syst.* 1, p. 162, 10.—*Icterus minor*, BRISS. II., p. 109, pl. 12, fig. 1.—*Le Baltimore*. BUFF. III., p. 231. *Pl. Enl.* 506, fig. 1.—*Baltimore Bird*, CATESB. *Car.* I, 48.—*Arct. Zool.* II., p. 142.—LATH. *Syn.* II., p. 432, 19.—BARTRAM, p. 290.

THIS is a bird of passage, arriving in Pennsylvania, from the south, about the beginning of May, and departing towards the latter end of August, or beginning of September. From the singularity of its colors, the construction of its nest, and its preferring the apple-trees, weeping-willows, walnut, and tulip-trees, adjoining the farm-house, to build on, it is generally known, and, as usual, honored with a variety of names, such as Hang-nest, Hanging-bird, Golden Robin, Fire-bird (from the bright orange seen through the green leaves, resembling a flash of fire), &c., but more generally the Baltimore-bird, so named, as Catesby informs us, from its colors, which are black and orange, being those of the arms or livery of Lord Baltimore, formerly proprietary of Maryland.

The Baltimore Oriole is seven inches in length; bill almost straight, strong, tapering to a sharp point, black, and sometimes lead colored above, the lower mandible light blue towards the base. Head, throat, upper part of the back and wings, black; lower part of the back, rump, and whole under parts, a bright orange, deepening into vermilion on the breast; the black on the shoulders is also divided by a band of orange; exterior edges of the greater wing-coverts, as well as the edges of the secondaries, and part of those of the primaries, white; the tail feathers, under the coverts, orange; the two middle ones thence to the tips are black, the next five, on each side, black near the coverts, and orange toward the extremities, so disposed, that when the tail is expanded, and the coverts removed, the black appears in the form of a pyramid, supported on an arch of orange, tail slightly forked, the ex-

* This genus has been variously divided by modern ornithologists. Temminck has separated it into four sections, viz.: *Cassicus*, *Quiscalia*, *Icterus*, and *Emberizoides*. The two species described by Wilson, belong to the third section, *Icterus*.

† *Coracias Galbula*, LINN. *Syst.* ed. 10, tom. I., 108.—*Oriolus Baltimore*, LATH. *Ind. Orn.* 180.

terior feather on each side a quarter of an inch shorter than the others; legs and feet light blue or lead color; iris of the eye hazel.

The female has the head, throat, upper part of the neck and back, of a dull black, each feather being skirted with olive yellow, lower part of the back, rump, upper tail-coverts, and whole lower parts, orange yellow, but much duller than that of the male; the whole wing feathers are of a deep dirty brown, except the quills, which are exteriorly edged, and the greater wing-coverts, and next superior row, which are broadly tipped, with a dull yellowish white; tail olive yellow; in some specimens the two middle feathers have been found partly black, in others wholly so; the black on the throat does not descend so far as in the male, is of a lighter tinge, and more irregular; bill, legs, and claws light blue.

Buffon, and Latham, have both described the male of the bastard Baltimore (*Oriolus spurius*), as the female Baltimore. Pennant has committed the same mistake; and all the ornithologists of Europe, with whose works I am acquainted, who have undertaken to figure and describe these birds, have mistaken the proper males and females, and confounded the two species together in a very confused and extraordinary manner, for which indeed we ought to pardon them, on account of their distance from the native residence of these birds, and the strange alterations of color which the latter are subject to.

This obscurity I have endeavored to clear up in the present volume of this work, Pl. IV., by exhibiting the male and female of the *Oriolus spurius* in their different changes of dress, as well as in their perfect plumage; and by introducing representations of the eggs of both, have, I hope, put the identity of these two species beyond all further dispute or ambiguity.

Almost the whole genus of Orioles belong to America, and with a few exceptions build pensile nests. Few of them, however, equal the Baltimore in the construction of these receptacles for their young, and in giving them, in such a superior degree, convenience, warmth, and security. For these purposes he generally fixes on the high bending extremities of the branches, fastening strong strings of hemp or flax round two forked twigs, corresponding to the intended width of the nest; with the same materials, mixed with quantities of loose tow, he interweaves or fabricates a strong firm kind of cloth, not unlike the substance of a hat in its raw state, forming it into a pouch of six or seven inches in depth, lining it substantially with various soft substances, well interwoven with the outward netting, and lastly, finishes with a layer of horse hair; the whole being shaded from the sun and rain by a natural pent-house, or canopy of leaves. As to a hole being left in the side for the young to be fed, and void their excrements through, as Pennant and others relate, it is certainly an error: I have never met with anything of the kind in the nest of the Baltimore.

Though birds of the same species have, generally speaking, a common form of building, yet, contrary to the usually received opinion, they do not build exactly in the same manner. As much difference will be found in the style, neatness, and finishing of the nests of the Baltimores, as in their voices. Some appear far superior workmen to others; and probably age may improve them in this as it does in their colors. I have a number of their nests now before me, all completed, and with eggs. One of these, the neatest, is in the form of a cylinder, of five inches diameter, and seven inches in depth, rounded at bottom. The opening at top is narrowed, by a horizontal covering, to two inches and a half in diameter. The materials are flax, hemp, tow, hair, and wool, woven into a complete cloth; the whole tightly sewed through and through with long horse-hairs, several of which measure two feet in length. The bottom is composed of thick tufts of cow-hair, sewed also with strong horse-hair. This nest was hung on the extremity of the horizontal branch of an apple-tree, fronting the south-east; was visible one hundred yards off, though shaded by the sun; and was the work of a very beautiful and perfect bird. The eggs are five, white, slightly tinged with flesh color, marked on the greater end with purple dots, and on the other parts with long hair-like lines, intersecting each other in a variety of directions. I am thus minute in these particulars, from a wish to point out the specific difference between the true and bastard Baltimore, which Dr. Latham and some others suspect to be only the same bird in different stages of color.

So solicitous is the Baltimore to procure proper materials for his nest, that, in the season of building, the women in the country are under the necessity of narrowly watching their thread that may chance to be out bleaching, and the farmer to secure his young grafts; as the Baltimore finding the former, and the strings which tie the latter, so well adapted for his purpose, frequently carries off both; or should the one be too heavy, and the other too firmly tied, he will tug at them a considerable time before he gives up the attempt. Skeins of silk, and hanks of thread, have been often found, after the leaves were fallen, hanging round the Baltimore's nest; but so woven up, and entangled, as to be entirely irreclaimable. Before the introduction of Europeans, no such material could have been obtained here; but with the sagacity of a good architect, he has improved this circumstance to his advantage; and the strongest and best materials are uniformly found in those parts by which the whole is supported.

Their principal food consists of caterpillars, beetles and bugs, particularly one of a brilliant glossy green, fragments of which I have almost always found in their stomach, and sometimes these only.

The song of the Baltimore is a clear mellow whistle, repeated at short intervals as he gleans among the branches. There is in it a certain

wild plaintiveness and *naïveté*, extremely interesting. It is not uttered with the rapidity of the ferruginous thrush (*Turdus rufus*), and some other eminent songsters; but with the pleasing tranquillity of a careless ploughboy, whistling merely for his own amusement. When alarmed by an approach to his nest, or any such circumstances, he makes a kind of rapid chirruping, very different from his usual note. This, however, is always succeeded by those mellow tones, which seem so congenial to his nature.

High on yon poplar, clad in glossiest green,
 The orange, black-capped Baltimore is seen,
 The broad extended boughs still please him best;
 Beneath their bending skirts he hangs his nest;
 There his sweet mate, secure from every harm,
 Broods o'er her spotted store, and wraps them warm;
 Lists to the noontide hum of busy bees,
 Her partner's mellow song, the brook, the breeze;
 These, day by day, the lonely hours deceive,
 From dewy morn to slow descending eve.
 Two weeks elapsed, behold a helpless crew!
 Claim all her care and her affection too;
 On wings of love the assiduous nurses fly,
 Flowers, leaves and boughs, abundant food supply;
 Glad chants their guardian as abroad he goes,
 And waving breezes rock them to repose.

The Baltimore inhabits North America, from Canada to Mexico, and is even found as far south as Brazil. Since the streets of our cities have been planted with that beautiful and stately tree, the Lombardy poplar, these birds are our constant visitors during the early part of summer; and amid the noise and tumult of coaches, drays, wheelbarrows, and the din of the multitude, they are heard chanting "their native wood-notes wild;" sometimes too within a few yards of an oysterman, who stands bellowing with the lungs of a Stentor, under the shade of the same tree; so much will habit reconcile even birds to the roar of the city, and to sounds and noises, that in other circumstances, would put a whole grove of them to flight.

These birds are several years in receiving their complete plumage. Sometimes the whole tail of a male individual, in spring, is yellow, sometimes only the two middle feathers are black, and frequently the black on the back is skirted with orange, and the tail tipped with the same color. Three years, I have reason to believe, are necessary to fix the full tint of the plumage, and then the male bird appears as already described.

ORIOLOUS BALTIMORUS.
BALTIMORE ORIOLE.

[Plate LIII. Fig. 4—Female.]

THE history of this beautiful species has been already particularly detailed; to this representation of the female, drawn of half the size of nature, a few particulars may be added. The males generally arrive several days before the females, saunter about their wonted places of residence, and seem lonely and less sprightly than after the arrival of their mates. In the spring and summer of 1811, a Baltimore took up its abode in Mr. Bartram's garden, whose notes were so singular as particularly to attract my attention; they were as well known to me as the voice of my most intimate friend. On the thirtieth of April, 1812, I was again surprised and pleased at hearing this same Baltimore in the garden, whistling his identical old chant; and I observed that he particularly frequented that quarter of the garden where the tree stood, on the pendent branches of which he had formed his nest the preceding year. This nest had been taken possession of by the House Wren, a few days after the Baltimore's brood had abandoned it; and, curious to know how the little intruder had furnished it within, I had taken it down early in the fall, after the Wren herself had also raised a brood of six young in it, and which was her second that season. I found it stripped of its original lining, floored with sticks, or small twigs, above which were laid feathers; so that the usual complete nest of the Wren occupied the interior of that of the Baltimore.

The chief difference between the male and female Baltimore Oriole, is the superior brightness of the orange color of the former to that of the latter. The black on the head, upper part of the back and throat, of the female, is intermixed with dull orange; whereas in the male those parts are of a deep shining black; the tail of the female also wants the greater part of the black, and the whole lower parts are of a much dusker orange.

I have observed that these birds are rarely seen in pine woods, or where these trees generally prevail. On the ridges of our high mountains, they are also seldom to be met with. In orchards, and on well cultivated farms, they are most numerous, generally preferring such places to build in, rather than the woods or forest.

SPECIES II. *ORIOLOUS MUTATUS*.*

ORCHARD ORIOLE.

[Plate IV.]

Bastard Baltimore, CATESBY, I., 49.—*Le Baltimore batard*, BUFFON, III., 233, *Pl. Enl.* 506.—*Oriolus spurius*, GMEL. *Syst.* I., p. 389.—LATH. *Syn.* II., p. 433, 20, p. 437, 24.—BARTRAM, p. 290.

THERE are no circumstances, relating to birds, which tend so much to render their history obscure and perplexing, as the various changes of color which many of them undergo. These changes are in some cases periodical, in others progressive; and are frequently so extraordinary, that, unless the naturalist has resided for years in the country where the birds inhabit, and has examined them at almost every season, he is extremely liable to be mistaken and imposed on by their novel appearance. Numerous instances of this kind might be cited, from the pages of European writers, in which the same bird has been described two, three, and even four different times, by the same person; and each time as a different kind. The species we are now about to examine is a remarkable example of this; and as it has never to my knowledge been either accurately figured or described, I have devoted one plate to the elucidation of its history.

The Count de Buffon, in introducing what he supposed to be the male of this bird, but which appears evidently to have been the female of the Baltimore Oriole, makes the following observations, which I give in the words of his translator: "This bird is so called (Spurious Baltimore,) because the colors of its plumage are not so lively as in the preceding (Baltimore O.) In fact, when we compare these birds, and find an exact correspondence in everything except the colors, and not even in the distribution of these, but only in the different tints they assume, we cannot hesitate to infer, that the Spurious Baltimore is a variety of a more generous race, degenerated by the influence of climate, or some other accidental cause."

* *O. Spurius*, LINN., which name must be adopted. *Icterus minor spurius*, BRISS. II., 111, pl. 10, fig. 3.—*Carouge de Cayenne*, BUFF. *Pl. Enl.* 607, fig. 1, (adult male.) *Carouge du Cap de bonne Espérance*, BUFF. *Pl. Enl.* 607, fig. 2, (female.) *Merle à gorge noire de St. Domingue*, BUFF. *Pl. Enl.* 559, (young male.)

How the influence of climate could affect one portion of a species and not the other, when both reside in the same climate, and feed nearly on the same food; or what accidental cause could produce a difference so striking, and also so regular, as exists between the two, are, I confess, matters beyond my comprehension. But, if it be recollected, that the bird which the Count was thus philosophizing upon, was nothing more than the female Baltimore Oriole, which exactly corresponds to the description of his male Bastard Baltimore, the difficulties at once vanish, and with them the whole superstructure of theory founded on this mistake. Dr. Latham also, while he confesses the great confusion and uncertainty that prevail between the true and bastard Baltimore and their females, considers it highly probable that the whole will be found to belong to one and the same species, in their different changes of color. In this conjecture, however, the worthy naturalist has likewise been mistaken; and I shall endeavor to point out the fact as well as the source of this mistake.

And here I cannot but take notice of the name which naturalists have bestowed on this bird, and which is certainly remarkable. Specific names, to be perfect, ought to express some peculiarity, common to no other of the genus; and should, at least, be consistent with truth; but in the case now before us, the name has no one merit of the former, nor even that of the latter to recommend it, and ought henceforth to be rejected as highly improper, and calculated, like that of Goatsucker, and many others equally ridiculous, to perpetuate that error from which it originated. The word *bastard* among men has its determinate meaning; but when applied to a whole species of birds, perfectly distinct from any other, originally deriving their peculiarities of form, manners, color, &c., from the common source of all created beings, and perpetuating them, by the usual laws of generation, as unmixed and independent as any other, is, to call it by no worse a name, a gross absurdity. Should the reader be displeased at this, I beg leave to remind him, that as the faithful historian of our feathered tribes, I must be allowed the liberty of vindicating them from every misrepresentation whatever, whether originating in ignorance or prejudice; and of allotting to each respective species, as far as I can distinguish, that rank and place in the great order of nature, to which it is entitled.

To convince the foreigner (for Americans have no doubt on the subject) that the present is a distinct species from the Baltimore, it might be sufficient to refer to the figure of the latter, in Plate I., and to fig. 4, Plate IV., of this work. I will however add, that I conclude this bird to be specifically different from the Baltimore, from the following circumstances: its size—it is less, and more slender; its colors, which are different, and *very differently disposed*; the form of its bill, which is sharper pointed, and more bent; the form of its tail, which is not *even*

but *wedged*; its notes, which are neither so full nor so mellow, and uttered with much more rapidity; its mode of building, and the materials it uses, both of which are different; and lastly, the shape and color of the eggs of each (see figs. *a* and *b*), which are evidently unlike. If all these circumstances, and I could enumerate a great many more, be not sufficient to designate this as a distinct species, by what criterion, I would ask, are we to discriminate between a *variety* and an *original* species, or to assure ourselves, that the Great Horned Owl is not in fact a *bastard* Goose, or the Carrion Crow a mere *variety* of the Humming Bird?

These mistakes have been occasioned by several causes. Principally by the changes of color, to which the birds are subject, and the distance of Europeans from the country they inhabit. Catesby, it is true, while in Carolina, described and figured the Baltimore, and perhaps was the first who published figures of either species; but he entirely omitted saying anything of the female; and instead of the male and female of the present species, as he thought, he has only figured the male in two of his different dresses; and succeeding compilers have followed and repeated the same error. Another cause may be assigned, viz., the extreme shyness of the female Orchard Oriole, represented at fig. 1. This bird has hitherto escaped the notice of European naturalists, or has been mistaken for another species, or perhaps for a young bird of the first season, which it almost exactly resembles. In none of the numerous works on ornithology has it ever before appeared in its proper character; though the male has been known to Europeans for more than a century, and has usually been figured in one of his dresses as male, and in another as female; these varying according to the fluctuating opinions of different writers. It is amusing to see how gentlemen have groped in the dark in pairing these two species of Orioles, of which the following examples may be given:

Buffon's and Latham's	} Male—Male Baltimore.
Baltimore Oriole.	} Female—Male Orchard Oriole, fig. 4.
Spurious Baltimore of	} Male—Female Baltimore.
Ditto.	} Female—Male Orchard Oriole, fig. 2.
Pennant's Baltimore O.	} Male—Male Baltimore.
	} Female—Young Male Baltimore.
Spurious O. of Ditto.	} Male—Male Orchard O., fig. 4.
	} Female—Ditto, ditto, fig. 2.
Catesby's Baltimore O.,	} Male—Male Baltimore.
	} Female—Not mentioned.
Spurious B. of Ditto.	} Male—Male Orchard O., fig. 2.
	} Female—Ditto, ditto, fig. 4.

Among all these authors, Catesby is doubtless the most inexcusable, having lived for several years in America, where he had an opportunity

of being more correct; yet when it is considered, that the female of this bird is so much shyer than the male, that it is seldom seen; and that while the males are flying around and bewailing an approach to their nest, the females keep aloof, watching every movement of the enemy in restless but silent anxiety; it is less to be wondered at, I say, that two birds of the same kind, but different in plumage, making their appearance together at such times, should be taken for male and female of the same nest, without doubt or examination, as from that strong sympathy for each other's distress, which prevails so universally among them at this season, it is difficult sometimes to distinguish between the sufferer and the sympathizing neighbor.

The female of the Orchard Oriole, fig. 1, is six inches and a half in length, and eleven inches in extent, the color above is a yellow olive, inclining to a brownish tint on the back; the wings are dusky brown, lesser wing-coverts tipped with yellowish white, greater coverts and secondaries exteriorly edged with the same, primaries slightly so; tail rounded at the extremity, the two exterior feathers three-quarters of an inch shorter than the middle ones; whole lower parts yellow; bill and legs light blue, the former bent a little, very sharp pointed, and black towards the extremity; iris of the eye hazel, pupil black. The young male of the first season corresponds nearly with the above description. But in the succeeding spring, he makes his appearance with a large patch of black marking the front, lores and throat, as represented in fig. 2. In this stage, too, the black sometimes makes its appearance on the two middle feathers of the tail; and slight stains of reddish are seen commencing on the sides and belly. The rest of the plumage as in the female. This continuing nearly the same on the same bird during the remainder of the season. At the same time other individuals are found as represented by fig. 3, which are at least birds of the third summer. These are mottled with black and olive on the upper parts of the back, and with reddish bay and yellow on the belly, sides and vent, scattered in the most irregular manner, not alike in any two individuals; and generally the two middle feathers of the tail are black, and the others centred with the same color. This bird is now evidently approaching to its perfect plumage, as represented in fig. 4, where the black spreads over the whole head, neck, upper part of the back, breast, wings and tail, the reddish bay or bright chestnut occupying the lower part of the breast, the belly, vent, rump, tail-coverts, and three lower rows of the lesser wing-coverts. The black on the head is deep and velvety; that of the wings inclining to brown; the greater wing-coverts are tipped with white. In the same orchard, and at the same time, males in each of these states of plumage may be found, united to their respective plain-colored mates.

In all these the manners, mode of building, food and notes are, gen-

erally speaking, the same, differing no more than those of any other individuals belonging to one common species. The female appears always nearly the same.

I have said that these birds construct their nests very differently from the Baltimores. They are so particularly fond of frequenting orchards, that scarcely one orchard in summer is without them. They usually suspend their nest from the twigs of the apple tree; and often from the extremities of the outward branches. It is formed exteriorly of a particular species of long, tough and flexible grass, knit or sewed through and through in a thousand directions, as if actually done with a needle. An old lady of my acquaintance, to whom I was one day showing this curious fabrication, after admiring its texture for some time, asked me in a tone between joke and earnest, whether I did not think it possible to learn these birds to darn stockings. This nest is hemispherical, three inches deep by four in breadth; the concavity scarcely two inches deep by two in diameter. I had the curiosity to detach one of the fibres, or stalks, of dried grass from the nest, and found it to measure thirteen inches in length, and in that distance was thirty-four times hooked through and returned, winding round and round the nest! The inside is usually composed of wool, or the light downy appendages attached to the seeds of the *Platanus occidentalis*, or button-wood, which form a very soft and commodious bed. Here and there the outward work is extended to an adjoining twig, round which it is strongly twisted, to give more stability to the whole, and prevent it from being overset by the wind.

When they choose the long pendent branches of the weeping-willow to build in, as they frequently do, the nest, though formed of the same materials, is made much deeper, and of slighter texture. The circumference is marked out by a number of these pensile twigs, that descend on each side like ribs, supporting the whole; their thick foliage, at the same time, completely concealing the nest from view. The depth in this case is increased to four or five inches, and the whole is made much slighter. These long pendent branches, being sometimes twelve and even fifteen feet in length, have a large sweep in the wind, and render the first of these precautions necessary, to prevent the eggs or young from being thrown out; and the close shelter afforded by the remarkable thickness of the foliage, is, no doubt, the cause of the latter. Two of these nests, such as I have here described, are now lying before me, and exhibit not only art in the construction, but judgment in adapting their fabrication so judiciously to their particular situations. If the actions of birds proceeded, as some would have us believe, from the mere impulses of that thing called *instinct*, individuals of the same species would uniformly build their nest in the same manner, wherever they might happen to fix it; but it is evident from these just mentioned, and a

thousand such circumstances, that they reason *à priori* from cause to consequence; providently managing with a constant eye to future necessity and convenience.

The eggs, one of which is represented in the same plate (fig. *a*), are usually four, of a very pale bluish tint, with a few small specks of brown and spots of dark purple. An egg of the Baltimore Oriole is exhibited beside it (fig. *b*); both of these were minutely copied from nature, and are sufficient of themselves to determine, beyond all possibility of doubt, the diversity of the two species. I may add, that Charles W. Peale, proprietor of the Museum in Philadelphia, who, as a practical naturalist, stands deservedly first in the first rank of American connoisseurs, has expressed to me his perfect conviction of the changes which these birds pass through; having himself examined them both in spring, and towards the latter part of summer, and having, at the present time, in his possession thirty or forty individuals of this species, in almost every gradation of change.

The Orchard Oriole, though partly a dependent on the industry of the farmer, is no sneaking pilferer, but an open and truly beneficent friend. To all those countless multitudes of destructive bugs and caterpillars, that infest the fruit trees in spring and summer, preying on the leaves, blossoms, and embryo of the fruit, he is a deadly enemy; devouring them wherever he can find them; and destroying, on an average, some hundreds of them every day; without offering the slightest injury to the fruit, however much it may stand in his way. I have witnessed instances where the entrance to his nest was more than half closed up by a cluster of apples, which he could have easily demolished in half a minute; but, as if holding the property of his patron sacred, or considering it as a natural bulwark to his own, he slid out and in with the greatest gentleness and caution. I am not sufficiently conversant in entomology to particularize the different species of insects on which he feeds; but I have good reason for believing that they are almost altogether such as commit the greatest depredations on the fruits of the orchard; and, as he visits us at a time when his services are of the greatest value, and, like a faithful guardian, takes up his station where the enemy is most to be expected, he ought to be held in respectful esteem, and protected by every considerate husbandman. Nor is the gaiety of his song one of his least recommendations. Being an exceedingly active, sprightly, and restless bird, he is on the ground—on the trees—flying and carolling in his hurried manner, in almost one and the same instant. His notes are shrill and lively, but uttered with such rapidity and seeming confusion, that the ear is unable to follow them distinctly. Between these he has a single note, which is agreeable and interesting. Wherever he is protected, he shows his confidence and gratitude, by his numbers and familiarity. In the Botanic Garden of my worthy and

scientific friends, the Messrs. Bartrams, of Kingsess,—which present an epitome of almost everything that is rare, useful, and beautiful in the vegetable kingdom of this western continent, and where the murderous gun scarce ever intrudes,—the Orchard Oriole revels without restraint, through thickets of aromatic flowers and blossoms; and heedless of the busy gardener that labors below, hangs his nest, in perfect security, on the branches over his head.

The female sits fourteen days; the young remain in the nest ten days afterwards,* before they venture abroad, which is generally about the middle of June. Nests of this species, with eggs, are sometimes found so late as the twentieth of July, which must belong to birds that have lost their first nest; or it is probable that many of them raise two broods in the same season, though I am not positive of the fact.

The Orchard Orioles arrive in Pennsylvania rather later than the Baltimores, commonly about the first week in May; and extend as far as the province of Maine. They are also more numerous towards the mountains than the latter species. In traversing the country near the Blue Ridge, in the month of August, I have seen at least five of this species for one of the Baltimore. Early in September, they take their departure for the south; their term of residence here being little more than four months. Previous to their departure, the young birds become gregarious, and frequent the rich extensive meadows of the Schuylkill, below Philadelphia, in flocks of from thirty to forty or upwards. They are easily raised from the nest, and soon become agreeable domestics. One which I reared and kept through the winter, whistled with great clearness and vivacity at two months old. It had an odd manner of moving its head and neck slowly and regularly, and in various directions, when intent on observing anything, without stirring its body. This motion was as slow and regular as that of a snake. When at night a candle was brought into the room, it became restless and evidently dissatisfied, fluttering about the cage as if seeking to get out; but when the cage was placed on the same table with the candle, it seemed extremely well pleased, fed and drank, dressed, shook, and arranged its plumage, sat as close to the light as possible, and sometimes chanted a few broken irregular notes in that situation, as I sat writing or reading beside it. I also kept a young female of the same nest, during the greatest part of winter, but could not observe, in that time, any change in its plumage.

* There is evidently some mistake here, as the young could hardly be fledged in ten days.

GENUS XVI. GRACULA. GRAKLE.

SPECIES I. GRACULA FERRUGINEA.

RUSTY GRAKLE.*

[Plate XXI. Fig. 3.]

Black Oriole, *Arct. Zool.* p. 259, No. 144.—*Rusty Oriole*, *Ibid.* p. 260, No. 146.—*New York Thrush*, *Ibid.* p. 339, No. 205.—*Hudsonian Thrush*, *Ibid.* No. 234, *female*.—*Labrador Thrush*, *Ibid.* p. 340, No. 206.

HERE is a single species described by one of the most judicious naturalists of Great Britain no less than five different times! The greater part of these descriptions is copied by succeeding naturalists, whose synonymes it is unnecessary to repeat. So great is the uncertainty in judging, from a mere examination of their dried or stuffed skins, of the particular tribes of birds, many of which, for several years, are constantly varying in the colors of their plumage; and at different seasons, or different ages, assuming new and very different appearances. Even the size is by no means a safe criterion, the difference in this respect between the male and female of the same species (as in the one now before us) being sometimes very considerable.

This bird arrives in Pennsylvania, from the north, early in October; associates with the Red-wings, and Cow-pen Buntings, frequents corn-fields, and places where grasshoppers are plenty; but Indian corn, at that season, seems to be its principal food. It is a very silent bird, having only now and then a single note, or *chuck*. We see them occasionally until about the middle of November, when they move off to the south. On the twelfth of January I overtook great numbers of these birds in the woods near Petersburg, Virginia, and continued to see occasional parties of them almost every day as I advanced southerly, particularly in South Carolina, around the rice plantations, where they were numerous; feeding about the hog-pens, and wherever Indian corn was to be procured. They also extend to a considerable distance westward. On the fifth of March, being on the banks of the Ohio, a few miles below the mouth of the Kentucky river, in the midst of a heavy snow-storm, a flock of these birds alighted near the door of the cabin

* The Genus *Gracula*, as at present restricted, consists of only a single species; the others formerly included in it have been distributed in other genera. The two species described by Wilson belong to the genus *Icterus* as adopted by Temminck.

where I had taken shelter, several of which I shot, and found their stomachs, as usual, crammed with Indian corn. Early in April they pass hastily through Pennsylvania, on their return to the north to breed.

From the accounts of persons who have resided near Hudson's Bay, it appears, that these birds arrive there in the beginning of June, as soon as the ground is thawed sufficiently for them to procure their food, which is said to be worms and maggots; sing with a fine note till the time of incubation, when they have only a chucking noise, till the young take their flight: at which time they resume their song. They build their nests in trees; about eight feet from the ground, forming them with moss and grass, and lay five eggs of a dark color, spotted with black. It is added, they gather in great flocks, and retire southerly in September.*

The male of this species, when in perfect plumage, is nine inches in length, and fourteen in extent; at a small distance appears wholly black; but on a near examination is of a glossy dark green; the irides of the eye are silvery, as in those of the Purple Grackle; the bill is black, nearly of the same form with that of the last-mentioned species; the lower mandible a little rounded, with the edges turned inward, and the upper one furnished with a sharp bony process on the inside, exactly like that of the purple species. The tongue is slender, and lacerated at the tip; legs and feet black and strong, the hind claw the largest; the tail is slightly rounded. This is the color of the male when of full age; but three-fourths of these birds which we meet with, have the whole plumage of the breast, head, neck, and back, tintured with brown, every feather being skirted with ferruginous; over the eye is a light line of pale brown, below that one of black passing through the eye. This brownness gradually goes off towards spring, for almost all those I shot in the southern states were but slightly marked with ferruginous. The female is nearly an inch shorter; head, neck, and breast, almost wholly brown; a light line over the eye, lores black; belly and rump ash; upper and under tail-coverts skirted with brown; wings black, edged with rust color; tail black, glossed with green; legs, feet and bill, as in the male.

These birds might easily be domesticated. Several that I had winged, and kept for some time, became in a few days quite familiar, seeming to be very easily reconciled to confinement.

* Arct. Zool. p. 259.

SPECIES II. *GRACULA QUISCALA*.

PURPLE GRAKLE.

[Plate XXI. Fig. 4.]

La Pie de la Jamaïque, BRISSON, II., 41.—BUFFON, III., 97, *Pl. Enl.* 538.—*Arct. Zool.* p. 309, No. 154.—*Gracula purpurea*, the lesser Purple Jackdaw, or Crow Black-bird, BARTRAM, p. 291.*

THIS noted depredator is well known to every farmer of the northern and middle states. About the twentieth of March the Purple Grakles visit Pennsylvania from the south, fly in loose flocks, frequent swamps and meadows, and follow in the furrows after the plough; their food at this season consisting of worms, grubs, and caterpillars, of which they destroy prodigious numbers, as if to recompense the husbandman beforehand for the havoc they intend to make among his crops of Indian corn. Towards evening they retire to the nearest cedars and pine trees to roost; making a continual chattering as they fly along. On the tallest of these trees they generally build their nests in company, about the beginning or middle of April; sometimes ten or fifteen nests being on the same tree. One of these nests, taken from a high pine tree, is now before me. It measures full five inches in diameter within, and four in depth; is composed outwardly of mud, mixed with long stalks and roots of a knotty kind of grass, and lined with fine bent and horse hair. The eggs are five, of a bluish olive color, marked with large spots and straggling streaks of black and dark brown, also with others of a fainter tinge. They rarely produce more than one brood in a season.

The trees where these birds build are often at no great distance from the farm-house, and overlook the plantations. From thence they issue, in all directions, and with as much confidence, to make their daily depredations among the surrounding fields, as if the whole were intended for their use alone. Their chief attention, however, is directed to the Indian corn in all its progressive stages. As soon as the infant blade of this grain begins to make its appearance above ground, the Grakles hail the welcome signal with screams of peculiar satisfaction; and without waiting for a formal invitation from the proprietor, descend on the

* We add the following synonymes: *Boat-tailed Grakle*, LATH. *Gen. Syn.* 1, p. 460, No. 5.—*Maize-thief*; KALM's *Travels*.—*Sturnus quiscala*, DAUDIN, 2, p. 316.—*Gracula barita*, *Journal Acad. Nat. Sciences of Philad.* vol. 1, p. 254.—*Quiscala versicolor*, BONAPARTE's *Ornithology*, vol. 1., p. 42, pl. V., female.

fields, and begin to pull up and regale themselves on the seed, scattering the green blades around. While thus eagerly employed, the vengeance of the gun sometimes overtakes them; but these disasters are soon forgotten, and those

“—— who live to get away,
Return to steal, another day.”

About the beginning of August, when the young ears are in their milky state, they are attacked with redoubled eagerness by the Grakles and Red-wings, in formidable and combined bodies. They descend like a blackening, sweeping tempest, on the corn, dig off the external covering of twelve or fifteen coats of leaves, as dexterously as if done by the hand of man, and having laid bare the ear, leave little behind to the farmer but the cobs, and shrivelled skins that contained their favorite fare. I have seen fields of corn of many acres, where more than one-half was thus ruined. Indeed the farmers in the immediate vicinity of the rivers Delaware and Schuylkill, generally allow one-fourth of this crop to the Blackbirds, among whom our Grakle comes in for his full share. During these depredations, the gun is making great havoc among their numbers, which has no other effect on the survivors than to send them to another field, or to another part of the same field. This system of plunder and of retaliation continues until November, when towards the middle of that month they begin to sheer off towards the south. The lower parts of Virginia, North and South Carolina, and Georgia, are the winter residences of these flocks. Here numerous bodies, collecting together from all quarters of the interior and northern districts, and darkening the air with their numbers, sometimes form one congregated multitude of many hundred thousands. A few miles from the banks of the Roanoke, on the twentieth of January, I met with one of those prodigious armies of Grakles. They rose from the surrounding fields with a noise like thunder, and descending on the length of road before me, covered it and the fences completely with black; and when they again rose, and after a few evolutions descended on the skirts of the high timbered woods, at that time destitute of leaves, they produced a most singular and striking effect; the whole trees for a considerable extent, from the top to the lowest branches, seeming as if hung in mourning; their notes and screaming the meanwhile resembling the distant sound of a great cataract, but in more musical cadence, swelling and dying away on the ear according to the fluctuation of the breeze. In Kentucky, and all along the Mississippi, from its junction with the Ohio to the Balize, I found numbers of these birds, so that the Purple Grakle may be considered as a very general inhabitant of the territory of the United States.

Every industrious farmer complains of the mischief committed on his

corn by the *Crow Blackbirds*, as they are usually called; though were the same means used, as with pigeons, to take them in clap-nets, multitudes of them might thus be destroyed; and the products of them in market, in some measure, indemnify him for their depredations. But they are most numerous and most destructive at a time when the various harvests of the husbandman demand all his attention, and all his hands to cut, cure, and take in; and so they escape with a few sweeps made among them by some of the younger boys, with the gun; and by the gunners from the neighboring towns and villages; and return from their winter quarters, sometimes early in March, to renew the like scenes over again. As some consolation, however, to the industrious cultivator, I can assure him, that were I placed in his situation, I should hesitate whether to consider these birds most as friends or enemies, as they are particularly destructive to almost all the noxious worms, grubs, and caterpillars, that infest his fields, which, were they allowed to multiply unmolested, would soon consume nine-tenths of all the production of his labor, and desolate the country with the miseries of famine! Is not this another striking proof that the Deity has created nothing in vain; and that it is the duty of man, the lord of the creation, to avail himself of their usefulness, and guard against their bad effects as securely as possible, without indulging in the barbarous, and even impious, wish for their utter extermination?

The Purple Grakle is twelve inches long, and eighteen in extent; on a slight view seems wholly black, but placed near, in a good light, the whole head, neck, and breast appear of a rich glossy steel blue, dark violet, and silky green; the violet prevails most on the head and breast, and the green on the hind part of the neck; the back, rump, and whole lower parts, the breast excepted, reflect a strong coppery gloss; wing-coverts, secondaries, and coverts of the tail, rich light violet, in which the red prevails; the rest of the wings, and cuneiform tail, are black, glossed with steel blue. All the above colors are extremely shining, varying as differently exposed to the light; iris of the eye silvery; bill more than an inch long, strong, and furnished on the inside of the upper mandible with a sharp process, like the stump of the broken blade of a penknife, intended to assist the bird in masticating its food; tongue thin, bifid at the end, and lacerated along the sides.

The female is rather less; has the upper part of the head, neck, and the back, of a dark sooty brown; chin, breast, and belly dull pale brown, lightest on the former; wings, tail, lower parts of the back and vent black, with a few reflections of dark green; legs, feet, bill, and eyes as in the male.

The Purple Grakle is easily tamed, and sings in confinement. They have also, in several instances, been taught to articulate some few words pretty distinctly.

A singular attachment frequently takes place between this bird and the Fish-Hawk. The nest of this latter is of very large dimensions, often from three to four feet in breadth, and from four to five feet high; composed, externally, of large sticks or faggots, among the interstices of which sometimes three or four pairs of Crow Blackbirds will construct their nests, while the Hawk is sitting or hatching above. Here each pursues the duties of incubation, and of rearing their young; living in the greatest harmony, and mutually watching and protecting each other's property from depredators.

Note.—The *Gracula quiscula* of the tenth edition of the *Systema Naturæ* was established upon Catesby's Purple Jackdaw. This bird is common in Carolina, Georgia, and Florida, where it is still known by the name of Jackdaw; whereas the Purple Grackle of Wilson is called Blackbird, or Crow Blackbird. The latter is also common in the states south of Virginia; but the Jackdaw, after rearing its young, retires further south on the approach of winter; whereas the Purple Grackle hibernates in the southern section of our Union, and migrates, in the spring, to the Middle and Northern States to breed. The female of the Crow Blackbird is dark sooty-brown and black; the female of the Jackdaw is "all over brown," agreeably to Catesby's description. This author states the weight of the Jackdaw to be *six ounces*; the weight of the Crow Blackbird seldom exceeds *four ounces and a half*. That the two species have been confounded there is no doubt; and it is not easy to disembroil the confusion into which they have been thrown by naturalists, who have never had an opportunity of visiting the native regions of both. It is evident that Catesby thought there was but one species of these birds in Carolina, otherwise he would have discovered that those which he observed during the winter in great flocks, were different from his Jackdaws, which is the proper summer resident of that State, although it is probable that some of the Crow Blackbirds are also indigenous. The true *Gracula barita* of Linnæus is not yet satisfactorily ascertained; the Boat-tailed Grackle of Latham's General Synopsis is unquestionably the Purple Grackle of Wilson. The best figures of the Purple Jackdaw which we have seen, are those given in Bonaparte's Ornithology, vol. 1, pl. 4. They were drawn by Mr. Alexander Rider of Philadelphia, (not by Mr. Audubon, as is stated,) from specimens brought from East Florida by Mr. Titian Peale and myself.—*G. Ord.*

GENUS XX. CUCULUS. CUCKOO.*

SPECIES I. *CUCULUS CAROLINENSIS*.

YELLOW-BILLED CUCKOO.

[Plate XXVIII. Fig. 1.]

Cuculus Americanus, LINN. *Syst.* ed. 10, p. 111.—CATESB. I., 9.—LATH. I., 537.—
Le Coucou de la Caroline, BRISS. IV., 112.—*Arct. Zool.* 265, No. 155.

A STRANGER who visits the United States for the purpose of examining their natural productions, and passes through our woods in the month of May or June, will sometimes hear as he traverses the borders of deep, retired, high timbered hollows, an uncouth guttural sound or note, resembling the syllables *kowe, kowe, kowe kowe kowe!* beginning slowly, but ending so rapidly, that the notes seem to run into each other, and *vice versa*; he will hear this frequently without being able to discover the bird or animal from which it proceeds, as it is both shy and solitary, seeking always the thickest foliage for concealment. This is the Yellow-billed Cuckoo, the subject of the present account. From the imitative sound of its note, it is known in many parts by the name of the *Cow-bird*; it is also called in Virginia the *Rain-Crow*, being observed to be most clamorous immediately before rain.

This species arrives in Pennsylvania, from the south, about the twenty-second of April, and spreads over the country as far at least as Lake Ontario; is numerous in the Chickasaw and Choctaw nations; and also breeds in the upper parts of Georgia; preferring in all these places the borders of solitary swamps and apple-orchards. It leaves us, on its return southward, about the middle of September.

The singular, I will not say unnatural, conduct of the European Cuckoo, (*Cuculus canorus*), which never constructs a nest for itself, but drops its eggs in those of other birds, and abandons them to their mercy and management, is so universally known, and so proverbial, that the whole tribe of Cuckoos have, by some inconsiderate people, been stigmatized as destitute of all parental care and affection. Without attempting to account for this remarkable habit of the European species, far less to consider as an error what the wisdom of Heaven has imposed as a duty

* This genus has been considerably restricted by recent ornithologists. The two species referred by Wilson to their genus belong to the genus *Coccyzus* of Vieillot, adopted by Temminck.

on the species, I will only remark, that the bird now before us builds its own nest, hatches its own eggs, and rears its own young; and in conjugal and parental affection seems nowise behind any of its neighbors of the grove.

Early in May they begin to pair, when obstinate battles take place among the males. About the tenth of that month they commence building. The nest is usually fixed among the horizontal branches of an apple-tree; sometimes in a solitary thorn, crab or cedar, in some retired part of the woods. It is constructed with little art, and scarcely any concavity, of small sticks and twigs, intermixed with green weeds, and blossoms of the common maple. On this almost flat bed, the eggs, usually three or four in number, are placed; these are of a uniform greenish blue color, and of a size proportionable to that of the bird. While the female is sitting, the male is generally not far distant, and gives the alarm by his notes, when any person is approaching. The female sits so close, that you may almost reach her with your hand, and then precipitates herself to the ground, feigning lameness, to draw you away from the spot, fluttering, trailing her wings, and tumbling over, in the manner of the Partridge, Woodcock, and many other species. Both parents unite in providing food for the young. This consists for the most part of caterpillars, particularly such as infest apple-trees. The same insects constitute the chief part of their own sustenance. They are accused, and with some justice, of sucking the eggs of other birds, like the Crow, the Blue Jay, and other pillagers. They also occasionally eat various kinds of berries. But from the circumstance of destroying such numbers of very noxious larvæ, they prove themselves the friends of the farmer, and are highly deserving of his protection.

The Yellow-billed Cuckoo is thirteen inches long, and sixteen inches in extent; the whole upper parts are of a dark glossy drab, or what is usually called a Quaker color, with greenish silky reflections; from this must however be excepted, the inner vanes of the wings, which are bright reddish cinnamon; the tail is long, composed of ten feathers, the two middle ones being of the same color as the back, the others which gradually shorten to the exterior ones, are black, largely tipped with white; the two outer ones are scarcely half the length of the middle one; the whole lower parts are pure white; the feathers covering the thighs being large like those of the Hawk tribe; the legs and feet are light blue, the toes placed two before, and two behind, as in the rest of the genus; the bill is long, a little bent, very broad at the base, dusky black above, and yellow below; the eye hazel, feathered close to the eyelid, which is yellow. The female differs little from the male; the four middle tail-feathers in her are of the same uniform drab; and the white, with which the others are tipped, not so pure as in the male.

In examining this bird by dissection, the inner membrane of the giz-

zard, which in many other species is so hard and muscular, in this is extremely lax and soft, capable of great distension; and, what is remarkable, is covered with a growth of fine down or hair, of a light fawn color. It is difficult to ascertain the particular purpose which nature intends by this excrescence; perhaps it may serve to shield the tender parts from the irritating effects produced by the hairs of certain caterpillars, some of which are said to be almost equal to the sting of a nettle.

SPECIES II. *CUCULUS ERYTHROPHthalmus*.

BLACK-BILLED CUCKOO.

[Plate XXVIII. Fig. 2.]

THIS Cuckoo is nearly as numerous as the former; but has hitherto escaped the notice of European naturalists; or from its general resemblance has been confounded with the preceding. Its particular markings, however, and some of its habits, sufficiently characterize it as a distinct species. Its general color above is nearly that of the former, inclining more to a pale ash on the cheeks and front; it is about an inch less in length; the tail is of a uniform dark silky drab, except at the tip, where each feather is marked with a spot of white, bordered above with a slight touch of dull black; the bill is wholly black, and much smaller than that of the preceding; and it wants the bright cinnamon on the wings. But what constitutes its most distinguishing trait is a bare wrinkled skin, of a deep red color, that surrounds the eye. The female differs little in external appearance from the male.

The Black-billed Cuckoo is particularly fond of the sides of creeks, feeding on small shell-fish, snails, &c. I have also often found broken pieces of oyster-shells in its gizzard, which, like that of the other, is covered with fine downy hair.

The nest of this bird is most commonly built in a cedar, much in the same manner, and of nearly the same materials, as that of the other; but the eggs are smaller, usually four or five in number, and of a rather deeper greenish blue.

This bird is likewise found in the state of Georgia, and has not escaped the notice of Mr. Abbot, who is satisfied of its being a distinct species from the preceding.

GENUS XXII. PICUS. WOODPECKER.

SPECIES I. *PICUS PRINCIPALIS*.

IVORY-BILLED WOODPECKER.

[Plate XXIX. Fig. 1.]

Picus principalis, LINN. *Syst.* I., p. 173, 2.—GMEL. *Syst.* I., p. 425.—*Picus niger Carolinensis cristatus*, BRISS. IV., p. 26, 9.—*Pic noir à bec blanc*, BUFF. VII., p. 46.—*Pl. Enl.* 690.—*King of the Woodpeckers*, KALM, vol. II., p. 85.—*White-billed Woodpecker*, CATESB. *Car.* I., 16.—*Arct. Zool.* II., No. 156.—LATH. *Syn.* II., p. 553.—BARTRAM, p. 289.

THIS majestic and formidable species, in strength and magnitude, stands at the head of the whole class of Woodpeckers hitherto discovered. He may be called the king or chief of his tribe; and Nature seems to have designed him a distinguished characteristic, in the superb carmine crest, and bill of polished ivory, with which she has ornamented him. His eye is brilliant and daring; and his whole frame so admirably adapted for his mode of life, and method of procuring subsistence, as to impress on the mind of the examiner the most reverential ideas of the Creator. His manners have also a dignity in them superior to the common herd of Woodpeckers. Trees, shrubbery, orchards, rails, fence-posts, and old prostrate logs, are alike interesting to those, in their humble and indefatigable search for prey; but the royal hunter now before us, scorns the humility of such situations, and seeks the most towering trees of the forest; seeming particularly attached to those prodigious cypress swamps, whose crowded giant sons stretch their bare and blasted, or moss-hung, arms midway to the skies. In these almost inaccessible recesses, amid ruinous piles of impending timber, his trumpet-like note, and loud strokes, resound through the solitary, savage wilds, of which he seems the sole lord and inhabitant. Wherever he frequents, he leaves numerous monuments of his industry behind him. We there see enormous pine-trees, with cart-loads of bark lying around their roots, and chips of the trunk itself in such quantities, as to suggest the idea that half a dozen of axemen had been at work for the whole morning. The body of the tree is also disfigured with such numerous and so large excavations, that one can hardly conceive it possible for the whole to be the work of a Woodpecker. With such strength, and an apparatus so powerful, what havoc might he not commit, if numerous, on the most useful of our forest trees; and yet with all these appear-

ances, and much of vulgar prejudice against him, it may fairly be questioned whether he is at all injurious; or, at least, whether his exertions do not contribute most powerfully to the protection of our timber. Examine closely the tree where he has been at work, and you will soon perceive, that it is neither from motives of mischief nor amusement that he slices off the bark, or digs his way into the trunk. For the sound and healthy tree is not in the least the object of his attention. The diseased, infested with insects, and hastening to putrefaction, are *his* favorites; there the deadly crawling enemy have formed a lodgment, between the bark and tender wood, to drink up the very vital part of the tree. It is the ravages of these vermin which the intelligent proprietor of the forest deplures, as the sole perpetrators of the destruction of his timber. Would it be believed that the larvæ of an insect, or fly, no larger than a grain of rice, should silently, and in one season, destroy some thousand acres of pine trees, many of them from two to three feet in diameter, and a hundred and fifty feet high! Yet whoever passes along the high road from Georgetown to Charleston, in South Carolina, about twenty miles from the former place, can have striking and melancholy proofs of this fact. In some places the whole woods, as far as you can see around you, are dead, stripped of the bark, their wintry-looking arms and bare trunks bleaching in the sun, and tumbling in ruins before every blast, presenting a frightful picture of desolation. And yet ignorance and prejudice stubbornly persist in directing their indignation against the bird now before us, the constant and mortal enemy of these very vermin, as if the hand that probed the wound, to extract its cause, should be equally detested with that which inflicted it; or as if the thief-catcher should be confounded with the thief. Until some effectual preventive, or more complete mode of destruction, can be devised against these insects, and their larvæ, I would humbly suggest the propriety of protecting, and receiving with proper feelings of gratitude, the services of this and the whole tribe of Woodpeckers, letting the odium of guilt fall to its proper owners.

In looking over the accounts given of the Ivory-billed Woodpecker by the naturalists of Europe, I find it asserted, that it inhabits from New Jersey to Mexico. I believe, however, that few of them are ever seen to the north of Virginia, and very few of them even in that state. The first place I observed this bird at, when on my way to the south, was about twelve miles north of Wilmington, in North Carolina. There I found the bird from which the drawing of the figure in the plate was taken. This bird was only wounded slightly in the wing, and on being caught, uttered a loudly-reiterated, and most piteous note, exactly resembling the violent crying of a young child; which terrified my horse so, as nearly to have cost me my life. It was distressing to hear it. I carried it with me in the chair, under cover, to Wilmington. In passing

through the streets, its affecting cries surprised every one within hearing, particularly the females, who hurried to the doors and windows, with looks of alarm and anxiety. I drove on, and on arriving at the piazza of the hotel, where I intended to put up, the landlord came forward, and a number of other persons who happened to be there, all equally alarmed at what they heard; this was greatly increased by my asking whether he could furnish me with accommodations for myself and my baby. The man looked blank, and foolish, while the others stared with still greater astonishment. After diverting myself for a minute or two at their expense, I drew my Woodpecker from under the cover, and a general laugh took place. I took him up stairs, and locked him up in my room, while I went to see my horse taken care of. In less than an hour I returned, and on opening the door he set up the same distressing shout, which now appeared to proceed from the grief that he had been discovered in his attempts at escape. He had mounted along the side of the window, nearly as high as the ceiling, a little below which he had begun to break through. The bed was covered with large pieces of plaster; the lath was exposed for at least fifteen inches square, and a hole, large enough to admit the fist, opened to the weather-boards; so that in less than another hour he would certainly have succeeded in making his way through. I now tied a string round his leg, and fastening it to the table, again left him. I wished to preserve his life, and had gone off in search of suitable food for him. As I reascended the stairs, I heard him again hard at work, and on entering had the mortification to perceive that he had almost entirely ruined the mahogany table to which he was fastened, and on which he had wreaked his whole vengeance. While engaged in taking the drawing, he cut me severely in several places, and on the whole, displayed such a noble and unconquerable spirit, that I was frequently tempted to restore him to his native woods. He lived with me nearly three days, but refused all sustenance, and I witnessed his death with regret.

The head and bill of this bird is in great esteem among the southern Indians, who wear them by way of amulet or charm, as well as ornament; and, it is said, dispose of them to the northern tribes at considerable prices. An Indian believes that the head, skin, or even feathers of certain birds, confer on the wearer all the virtues or excellencies of those birds. Thus I have seen a coat made of the skins, heads and claws of the Raven; caps stuck round with heads of Butcher-birds, Hawks and Eagles; and as the disposition and courage of the Ivory-billed Woodpecker are well known to the savages, no wonder they should attach great value to it, having both beauty, and, in their estimation, distinguished merit to recommend it.

This bird is not migratory, but resident in the countries where it inhabits. In the low counties of the Carolinas, it usually prefers the large-

timbered cypress swamps for breeding in. In the trunk of one of these trees, at a considerable height, the male and female alternately, and in conjunction, dig out a large and capacious cavity for their eggs and young. Trees thus dug out have frequently been cut down, with sometimes the eggs and young in them. This hole according to information, for I have never seen one myself, is generally a little winding, the better to keep out the weather, and from two to five feet deep. The eggs are said to be generally four, sometimes five, as large as a pullet's, pure white, and equally thick at both ends; a description that, except in size, very nearly agrees with all the rest of our Woodpeckers. The young begin to be seen abroad about the middle of June. Whether they breed more than once in the same season is uncertain.

So little attention do the people of the countries where these birds inhabit, pay to the minutiae of natural history, that, generally speaking, they make no distinction between the Ivory-billed and Pileated Woodpecker, represented in the same plate; and it was not till I showed them the two birds together, that they knew of any difference. The more intelligent and observing part of the natives, however, distinguish them by the name of the large and lesser *Logcocks*. They seldom examine them but at a distance, gunpowder being considered too precious to be thrown away on Woodpeckers; nothing less than a Turkey being thought worth the value of a load.

The food of this bird consists, I believe, entirely of insects and their larvæ. The Pileated Woodpecker is suspected of sometimes tasting the Indian corn; the Ivory-billed never. His common note, repeated every three or four seconds, very much resembles the tone of a trumpet, or the high note of a clarionet, and can plainly be distinguished at the distance of more than half a mile; seeming to be immediately at hand, though perhaps more than one hundred yards off. This it utters while mounting along the trunk, or digging into it. At these times it has a stately and novel appearance; and the note instantly attracts the notice of a stranger. Along the borders of the Savannah river, between Savannah and Augusta, I found them very frequently; but my horse no sooner heard their trumpet-like note, than remembering his former alarm, he became almost ungovernable.

The Ivory-billed Woodpecker is twenty inches long, and thirty inches in extent; the general color is black, with a considerable gloss of green when exposed to a good light; iris of the eye vivid yellow; nostrils covered with recumbent white hairs; fore part of the head black, rest of the crest of a most splendid red, spotted at the bottom with white, which is only seen when the crest is erected, as represented in the plate; this long red plumage being ash-colored at its base, above that white, and ending in brilliant red; a stripe of white proceeds from a point, about half an inch below each eye, passes down each side of the neck,

and along the back, where they are about an inch apart, nearly to the rump; the first five primaries are wholly black, on the next five the white spreads from the tip higher and higher to the secondaries, which are wholly white from their coverts downwards: these markings, when the wings are shut, make the bird appear as if his back were white, hence he has been called, by some of our naturalists, the large White-backed Woodpecker; the neck is long; the beak an inch broad at the base, of the color and consistence of ivory, prodigiously strong, and elegantly fluted; the tail is black, tapering from the two exterior feathers, which are three inches shorter than the middle ones, and each feather has the singularity of being greatly concave below; the wing is lined with yellowish white; the legs are about an inch and a quarter long, the exterior toe about the same length, the claws exactly semicircular and remarkably powerful, the whole of a light blue or lead color. The female is about half an inch shorter, the bill rather less, and the whole plumage of the head black, glossed with green; in the other parts of the plumage she exactly resembles the male. In the stomachs of three which I opened, I found large quantities of a species of worm called *borers*, two or three inches long, of a dirty cream-color, with a black head; the stomach was an oblong pouch, not muscular like the gizzards of some others. The tongue was worm-shaped, and for half an inch at the tip as hard as horn, flat, pointed, of the same white color as the bill, and thickly barbed on each side.

SPECIES II. *PICUS PILEATUS*.

PILEATED WOODPECKER.

[Plate XXIX. Fig. 2.]

Picus pileatus, LATH. *Ind. Orn.* I., p. 225, 4.—LINN. *Syst.* I., p. 173, 3.—GMEL. *Syst.* I., p. 425.—*Picus niger Virginianus cristatus*, BRISS. IV., p. 29, 10.—*Pic noir à huppe rouge*, BUFF. VII., p. 48.—*Pic noir huppe de la Louisiane*, PL. ENL. 718.—*Larger crested Woodpecker*, CATESB. *Car.* I., 17.—*Pileated Woodpecker*, ARCT. Zool. II., No. 157.—LATH. *Syn.* II., p. 554, 3.—Id. *Sup.* p. 105.—BARTRAM, p. 289.

THIS American species is the second in size among his tribe, and may be styled the Great Northern Chief of the Woodpeckers, though, in fact, his range extends over the whole of the United States, from the interior of Canada to the Gulf of Mexico. He is very numerous in the Genesee country, and in all the tracts of high-timbered forests, particularly in the neighborhood of our large rivers, where he is noted for making a loud and almost incessant cackling before wet weather; flying

at such times in a restless uneasy manner from tree to tree, making the woods echo to his outcry. In Pennsylvania, and the Northern States, he is called the Black Woodcock; in the Southern States, the Logcock. Almost every old trunk in the forest, where he resides, bears the marks of his chisel. Wherever he perceives a tree beginning to decay, he examines it round and round with great skill and dexterity, strips off the bark in sheets of five or six feet in length to get at the hidden cause of the disease, and labors with a gayety and activity really surprising. I have seen him separate the greatest part of the bark from a large dead pine-tree, for twenty or thirty feet, in less than a quarter of an hour. Whether engaged in flying from tree to tree, in digging, climbing or barking, he seems perpetually in a hurry. He is extremely hard to kill, clinging close to the tree even after he has received his mortal wound; nor yielding up his hold but with his expiring breath. If slightly wounded in the wing, and dropped while flying, he instantly makes for the nearest tree, and strikes, with great bitterness, at the hand stretched out to seize him; and can rarely be reconciled to confinement. He is sometimes observed among the hills of Indian corn, and it is said by some that he frequently feeds on it. Complaints of this kind are, however, not general; many farmers doubting the fact, and conceiving that at these times he is in search of insects which lie concealed in the husk. I will not be positive that they never occasionally taste maize; yet I have opened and examined great numbers of these birds, killed in various parts of the United States, from Lake Ontario to the Altamaha river, but never found a grain of Indian corn in their stomachs.

The Pileated Woodpecker is not migratory, but braves the extremes of both the arctic and torrid regions. Neither is he gregarious, for it is rare to see more than one or two, or at the most three, in company. Formerly they were numerous in the neighborhood of Philadelphia; but gradually as the old timber fell, and the country became better cleared, they retreated to the forest. At present few of these birds are to be found within ten or fifteen miles of the city.

Their nest is built, or rather the eggs are deposited, in the hole of a tree, dug out by themselves, no other materials being used but the soft chips of rotten wood. The female lays six large eggs of a snowy whiteness; and, it is said, they generally raise two broods in the same season.

This species is eighteen inches long, and twenty-eight in extent; the general color is a dusky brownish black; the head is ornamented with a conical cap of bright scarlet; two scarlet mustaches proceed from the lower mandible; the chin is white; the nostrils are covered with brownish white hair-like feathers, and this stripe of white passes thence down the side of the neck to the sides, spreading under the wings; the upper half of the wings, is white, but concealed by the black coverts; the lower extremities of the wings are black; so that the white on the wing

is not seen when the bird is flying, at which time it is very prominent; the tail is tapering, the feathers being very convex above and strong; the legs are of a leaden gray color, very short, scarcely half an inch, the toes very long, the claws strong and semicircular, and of a pale blue; the bill is fluted, sharply ridged, very broad at the base, bluish black above, below and at the point bluish white; the eye is of a bright golden color; the pupil black; the tongue, like those of its tribe, is worm-shaped, except near the tip, where for one-eighth of an inch it is horny, pointed, and beset with barbs.

The female has the forehead, and nearly to the crown, of a light brown color, and the mustaches are dusky instead of red. In both, a fine line of white separates the red crest from the dusky line that passes over the eye.

SPECIES III. *PICUS AURATUS.*

GOLDEN-WINGED WOODPECKER.

[Plate III. Fig. 1.]

Le Pic aux ailes dorées, BUFFON, VII., 39. *Pl. Enl.* 693.—*Picus auratus*, LINN. *Syst.* 174.—*Cuculus alis de auratis*, KLEIN, p. 30.—CATESBY, I., 18.—LATHAM, II., 597. BARTRAM, p. 289.*

THIS elegant bird is well known to our farmers and junior sportsmen, who take every opportunity of destroying him; the former for the supposed trespasses he commits on their Indian corn, or the trifle he will bring in market, and the latter for the mere pleasure of destruction, and perhaps for the flavor of his flesh, which is in general esteem. In the state of Pennsylvania he can scarcely be called a bird of passage, as even in severe winters they may be found within a few miles of the city of Philadelphia; and I have known them exposed for sale in market every week during the months of November, December and January, and that too in more than commonly rigorous weather. They, no doubt, partially migrate, even here; being much more numerous in spring and fall than in winter. Early in the month of April they begin to prepare their nest, which is built in the hollow body or branch of a tree, sometimes, though not always, at a considerable height from the ground; for I have frequently known them fix on the trunk of an old apple-tree,

* We add the following synonymes:—*Cuculus auratus*, LINN. *Syst.* ed. 10, 1, 112.—GMEL. *Syst.* I., 430.—LATH. *Ind. Orn.* p. 242.—*Picus Canadensis striatus*, BRISS. 4, 72.—PENN. *Arct. Zool.* No. 158.

at not more than six feet from the root. The sagacity of this bird in discovering, under a sound bark, a hollow limb or trunk of a tree, and its perseverance in perforating it for the purpose of incubation, are truly surprising; the male and female alternately relieving and encouraging each other by mutual caresses, renewing their labors for several days, till the object is attained, and the place rendered sufficiently capacious, convenient and secure. At this employment they are so extremely intent, that they may be heard till a very late hour in the evening, thumping like carpenters. I have seen an instance where they had dug first five inches straight forwards, and then downwards more than twice that distance, through a solid black oak. They carry in no materials for their nest, the soft chips, and dust of the wood, serving for this purpose. The female lays six white eggs, almost transparent. The young early leave the nest, and, climbing to the higher branches, are there fed by their parents.

The food of this bird varies with the season. As the common cherries, bird-cherries, and berries of the sour gum, successively ripen, he regales plentifully on them, particularly on the latter; but the chief food of this species, or that which is most usually found in his stomach, is wood-lice, and the young and larvæ of ants, of which he is so immoderately fond, that I have frequently found his stomach distended with a mass of these, and these only, as large nearly as a plum. For the procuring of these insects, nature has remarkably fitted him. The bills of Woodpeckers, in general, are straight, grooved or channelled, wedge-shaped, and compressed to a thin edge at the end, that they may the easier penetrate the hardest wood; that of the Golden-winged Woodpecker is long, slightly bent, ridged only on the top, and tapering almost to a point, yet still retaining a little of the wedge form there. Both, however, are admirably adapted to the peculiar manner each has of procuring its food. The former, like a powerful wedge, to penetrate the dead and decaying branches, after worms and insects; the latter, like a long and sharp pick-axe, to dig up the hillocks of pismires, that inhabit old stumps in prodigious multitudes. These beneficial services would entitle him to some regard from the husbandman, were he not accused, and perhaps not without just cause, of being too partial to the Indian corn, when in that state which is usually called *roasting-ears*. His visits are indeed rather frequent about this time; and the farmer, suspecting what is going on, steals through among the rows with his gun, bent on vengeance, and forgetful of the benevolent sentiment of the poet; that

“—— Just as wide of *justice* he must fall
Who thinks all made for One, not one for all.”

But farmers, in general, are not much versed in poetry, and pretty well

acquainted with the value of corn, from the hard labor requisite in raising it.

In rambling through the woods one day, I happened to shoot at one of these birds, and wounded him slightly in the wing. Finding him in full feather, and seemingly but little hurt, I took him home, and put him into a large cage, made of willows, intending to keep him in my own room, that we might become better acquainted. As soon as he found himself enclosed on all sides, he lost no time in idle fluttering, but throwing himself against the bars of the cage, began instantly to demolish the willows, battering them with great vehemence, and uttering a loud piteous kind of cackling, similar to that of a hen when she is alarmed, and takes to wing. Poor Baron Trenck never labored with more eager diligence at the walls of his prison, than this son of the forest in his exertions for liberty; and he exercised his powerful bill with such force, digging into the sticks, seizing and shaking them so from side to side, that he soon opened for himself a passage; and though I repeatedly repaired the breach, and barricaded every opening in the best manner I could, yet on my return into the room, I always found him at large, climbing up the chairs, or running about the floor, where, from the dexterity of his motions, moving backwards, forwards, and sidewise, with the same facility, it became difficult to get hold of him again. Having placed him in a strong wire cage, he seemed to give up all hopes of making his escape, and soon became very tame; fed on young ears of Indian corn; refused apples, but ate the berries of the sour gum greedily, small winter grapes, and several other kinds of berries; exercised himself frequently in climbing, or rather hopping perpendicularly along the sides of the cage; and as evening drew on, fixed himself in a high hanging or perpendicular position, and slept with his head in his wing. As soon as dawn appeared, even before it was light enough to perceive him distinctly across the room, he descended to the bottom of the cage, and began his attack on the ears of Indian corn, rapping so loud as to be heard from every room in the house. After this he would sometimes resume his former position, and take another nap. He was beginning to become very amusing, and even sociable, when, after a lapse of several weeks, he became drooping, and died, as I conceived, from the effects of his wound.

Some European naturalists (and among the rest Linnæus himself, in his tenth edition of the *Systema Naturæ*), have classed this bird with the genus *Cuculus*, or Cuckoo, informing their readers that it possesses many of the habits of the Cuckoo; that it is almost always on the ground; is never seen to climb trees like the other Woodpeckers, and that its bill is altogether unlike theirs; every one of which assertions I must say is incorrect, and could have only proceeded from an entire unacquaintance with the manners of the bird. Except in the article of the

bill, and that, as been before observed, is still a little wedge-formed at the point, it differs in no one characteristic from the rest of its genus. Its nostrils are covered with tufts of recumbent hairs or small feathers; its tongue is round, worm-shaped, flattened towards the tip, pointed, and furnished with minute barbs; it is also long, missile, and can be instantaneously protruded to an uncommon distance. The os hyoides, or internal parts of the tongue, like those of its tribe, is a substance for strength and elasticity resembling whalebone, divided into two branches, each the thickness of a knitting-needle, that pass, one on each side of the neck, to the hind-head, where they unite, and run up along the skull in a groove, covered with a thin membrane or sheath; descend into the upper mandible by the right side of the right nostril, and reach to within half an inch of the point of the bill, to which they are attached by another extremely elastic membrane, that yields when the tongue is thrown out, and contracts as it is retracted. In the other Woodpeckers we behold the same apparatus, differing a little in different species. In some these cartilaginous substances reach only to the top of the cranium; in others they reach to the nostril; and in one species they are wound round the bone of the right eye, which projects considerably more than the left for its accommodation.

The tongue of the Golden-winged Woodpecker, like the others, is also supplied with a viscid fluid, secreted by two glands, that lie under the ear on each side, and are at least five times larger in this species than in any other of its size; with this the tongue is continually moistened, so that every small insect it touches instantly adheres to it. The tail, in its strength and pointedness, as well as the feet and claws, prove that the bird was designed for climbing; and in fact I have scarcely ever seen it on a tree five minutes at a time without climbing; hopping not only upwards and downwards, but spirally; pursuing and playing with its fellow, in this manner, round the body of the tree. I have also seen them a hundred times alight on the trunk of the tree; though they more frequently alight on the branches; but that they climb, construct like nests, lay the same number, and the like colored eggs, and have the manners and habits of the Woodpeckers, is notorious to every American naturalist; while neither in the form of their body, nor any other part, except in the bill being somewhat bent, and the toes placed two before, and two behind, have they the smallest resemblance whatever to the Cuckoo.

It may not be improper, however, to observe, that there is another species of Woodpecker, called also Golden-Winged,* which inhabits the country near the Cape of Good Hope, and resembles the present, it is said, almost exactly in the color and form of its bill, and in the tint and markings of its plumage; with this difference, that the moustaches are

* *Picus cafer*, Turton's Linn.

red instead of black, and the lower side of the wings, as well as their shafts, are also red, where the other is golden yellow. It is also considerably less. With respect to the habits of this new species, we have no particular account; but there is little doubt that they will be found to correspond with the one we are now describing.

The abject and degraded character which the Count de Buffon, with equal eloquence and absurdity, has drawn of the whole tribe of Woodpeckers, belongs not to the elegant and sprightly bird now before us. How far it is applicable to any of them will be examined hereafter. He is not "constrained to drag out an insipid existence in boring the bark and hard fibres of trees to extract his prey," for he frequently finds in the loose mouldering ruins of an old stump (the capital of a nation of pismires), more than is sufficient for the wants of a whole week. *He* cannot be said to "lead a mean and gloomy life, without an intermission of labor," who usually feasts by the first peep of dawn, and spends the early, and sweetest hours of morning, on the highest peaks of the tallest trees, calling on his mate or companions; or pursuing and gamboling with them round the larger limbs and body of the tree for hours together; for such are really his habits. Can it be said that "necessity never grants an interval of sound repose" to that bird, who, while other tribes are exposed to all the peltings of the midnight storm, lodges dry and secure in a snug chamber of his own constructing? or that "the narrow circumference of a tree circumscribes *his* dull round of life," who, as seasons and inclination inspire, roams from the frigid to the torrid zone, feasting on the abundance of various regions? Or is it a proof that "his appetite is never softened by delicacy of taste," because he so often varies his bill of fare, occasionally preferring to animal food the rich milkiness of young Indian corn, and the wholesome and nourishing berries of the Wild Cherry, Sour Gum, and Red Cedar? Let the reader turn to the faithful representation of him given in the plate, and say whether his looks be "sad and melancholy!" It is truly ridiculous and astonishing that such absurdities should escape the lips or pen of one so able to do justice to the respective merits of every species; but Buffon had too often a favorite theory to prop up, that led him insensibly astray; and so, forsooth, the whole family of Woodpeckers must look sad, sour, and be miserable, to satisfy the caprice of a whimsical philosopher, who takes it into his head that they are, and ought to be, so.

But the count is not the only European who has misrepresented and traduced this beautiful bird. One has given him brown legs,* another a yellow neck;† a third has declared him a Cuckoo,‡ and in an English translation of Linnæus's System of Nature, lately published, he is char-

* See Encyl. Brit. Art. PICUS.

† Latham.

‡ Klein.

acterized as follows: "transversely striate with black and gray; chin and breast black; does not climb trees;"* which is just as correct as if, in describing the human species, we should say—skin striped with black and green; cheeks blue; chin orange; never walks on foot, &c. The pages of natural history should resemble a faithful mirror, in which mankind may recognise the true images of the living originals; instead of which we find this department of them, too often, like the hazy and rough medium of wretched window-glass, through whose crooked protuberances everything appears so strangely distorted, that one scarcely knows his most intimate neighbors and acquaintance.

The Golden-winged Woodpecker has the back and wings above of a dark umber, transversely marked with equidistant streaks of black; upper part of the head an iron gray; cheeks and parts surrounding the eyes, a fine cinnamon color; from the lower mandible a strip of black, an inch in length, passes down each side of the throat, and a lunated spot, of a vivid blood red, covers the hindhead, its two points reaching within half an inch of each eye; the sides of the neck, below this, incline to a bluish gray; throat and chin a very light cinnamon or fawn color; the breast is ornamented with a broad crescent of deep black; the belly and vent white, tinged with yellow, and scattered with innumerable round spots of black, every feather having a distinct central spot, those on the thighs and vent being heart-shaped and largest; the lower or inner side of the wing and tail, shafts of all the larger feathers, and indeed of almost every feather, are of a beautiful golden yellow—that on the shafts of the primaries being very distinguishable, even when the wings are shut; the rump is white, and remarkably prominent; the tail-coverts white, and curiously serrated with black; upper side of the tail, and the tip below, black, edged with light loose filaments of a cream color, the two exterior feathers serrated with whitish; shafts black towards the tips, the two middle ones nearly wholly so; bill an inch and a half long, of a dusky horn color, somewhat bent, ridged only on the top, tapering, but not to a point, that being a little wedge-formed; legs and feet light blue; iris of the eye hazel; length twelve inches, extent twenty. The female differs from the male chiefly in the greater obscurity of the fine colors, and in wanting the black moustaches on each side of the throat. This description, as well as the drawing, was taken from a very beautiful and perfect specimen.

Though this species, generally speaking, is migratory, yet they often remain with us in Pennsylvania during the whole winter. They also inhabit the continent of North America, from Hudson's Bay to Georgia; and have been found by voyagers on the northwest coast of America. They arrive at Hudson's Bay in April, and leave it in September. Mr.

* Turton's Linnæus, vol. i., p. 264.

Hearne, however, informs us that the "Golden-winged Woodpecker is almost the only species of Woodpecker that winters near Hudson's Bay." The natives there call it *Ou-thee-quan-nor-ow*, from the golden color of the shafts and lower side of the wings. It has numerous provincial appellations in the different States of the Union, such as "High-hole," from the situation of its nest, and "Hittock," "Yucker," "Piut," "Flicker," by which last it is usually known in Pennsylvania. These names have probably originated from a fancied resemblance of its notes to the sound of the words; for one of its most common cries consists of two notes or syllables, frequently repeated, which, by the help of the hearer's imagination, may easily be made to resemble any or all of them.

SPECIES IV. *PICUS ERYTHROCEPHALUS*.

RED-HEADED WOODPECKER.

[Plate IX. Fig. 1.]

Picus erythrocephalus, LINN. *Syst. I.*, 174, 7.—GMEL. *Syst. I.*, 429.—*Pic noir à domino rouge*, BUFFON, VII., 55. *Pl. Enl.* 117.—CATESBY, I., 20.—*Arct. Zool.* II., No. 160.—LATH. *Syn.* II., 561.*

THERE is perhaps no bird in North America more universally known than this. His tri-colored plumage, red, white, and black glossed with steel blue, is so striking, and characteristic; and his predatory habits in the orchards and corn-fields, added to his numbers, and fondness for hovering along the fences, so very notorious, that almost every child is acquainted with the Red-headed Woodpecker. In the immediate neighborhood of our large cities, where the old timber is chiefly cut down, he is not so frequently found; and yet at this present time, June, 1808, I know of several of their nests, within the boundaries of the city of Philadelphia. Two of these are in button-wood trees (*Platanus occidentalis*), and another in the decayed limb of an elm. The old ones, I observe, make their excursions regularly to the woods beyond the Schuylkill, about a mile distant; preserving great silence and circumspection in visiting their nests; precautions not much attended to by them in the depths of the woods, because there the prying eye of man is less to be dreaded. Towards the mountains, particularly in the vicinity of creeks and rivers, these birds are extremely abundant, especially in the latter end of summer. Wherever you travel in the interior, at

* We add the following synonymes:—*Picus obscurus*, GMEL. *Syst. I.*, 429, *young*.—LATH. *Ind. Orn.* 228.—*Picus Virginianus erythrocephalus*, BRISS. 4, p. 52.

that season, you hear them screaming from the adjoining woods, rattling on the dead limbs of trees or on the fences, where they are perpetually seen flitting from stake to stake, on the roadside before you. Wherever there is a tree, or trees, of the wild-cherry, covered with ripe fruit, there you see them busy among the branches; and in passing orchards, you may easily know where to find the earliest, sweetest apples, by observing those trees, on or near which the Red-headed Woodpecker is skulking; for he is so excellent a connoisseur in fruit, that wherever an apple or pear is found broached by him, it is sure to be amongst the ripest and best flavored. When alarmed, he seizes a capital one by striking his open bill deep into it, and bears it off to the woods. When the Indian corn is in its rich, succulent, milky state, he attacks it with great eagerness, opening a passage through the numerous folds of the husk, and feeding on it with voracity. The girdled, or deadened timber, so common among corn-fields, in the back settlements, are his favorite retreats, whence he sallies out to make his depredations. He is fond of the ripe berries of the sour gum; and pays pretty regular visits to the cherry-trees, when loaded with fruit. Towards fall, he often approaches the barn, or farm-house, and raps on the shingles and weather-boards. He is of a gay and frolicsome disposition; and half a dozen of the fraternity are frequently seen diving and vociferating around the high dead limbs of some large tree, pursuing and playing with each other, and amusing the passenger with their gambols. Their note or cry is shrill and lively, and so much resembles that of a species of tree frog, which frequents the same tree, that it is sometimes difficult to distinguish the one from the other.

Such are the *vicious* traits, if I may so speak, in the character of the Red-headed Woodpecker; and I doubt not but from what has been said on this subject, that some readers would consider it meritorious to exterminate the whole tribe, as a nuisance; and in fact the legislatures of some of our provinces, in former times, offered premiums, to the amount of twopence per head, for their destruction.* But let us not condemn the species unheard. They exist; they must therefore be necessary. If their merits and usefulness be found, on examination, to preponderate against their vices, let us avail ourselves of the former, while we guard, as well as we can, against the latter.

Though this bird occasionally regales himself on fruit, yet his natural, and most useful, food is insects, particularly those numerous and destructive species that penetrate the bark and body of the tree, to deposit their eggs and larvæ, the latter of which are well known to make immense havoc. That insects are his natural food, is evident from the construction of his wedge-formed bill, the length, elasticity, and figure

* Kalm.

of his tongue, and the strength and position of his claws; as well as from his usual habits. In fact, insects form at least two-thirds of his subsistence; and his stomach is scarcely ever found without them. He searches for them with a dexterity and intelligence, I may safely say, more than human; he perceives by the exterior appearance of the bark where they lurk below; when he is dubious, he rattles vehemently on the outside with his bill, and his acute ear distinguishes the terrified vermin shrinking within to their inmost retreats, where his pointed and barbed tongue soon reaches them. The masses of bugs, caterpillars, and other larvæ, which I have taken from the stomachs of these birds, have often surprised me. These larvæ, it should be remembered, feed not only on the buds, leaves and blossoms, but on the very vegetable life of the tree, the alburnum, or newly forming bark and wood; the consequence is, that whole branches, and whole trees, decay, under the silent ravages of these destructive vermin; witness the late destruction of many hundred acres of pine-trees in the north-eastern parts of South Carolina;* and the thousands of peach-trees that yearly decay from the same cause. Will any one say, that taking half a dozen, or half a hundred, apples from a tree, is equally ruinous with cutting it down? or, that the services of a useful animal should not be rewarded with a small portion of that which it has contributed to preserve? We are told, in the benevolent language of the Scriptures, not to muzzle the mouth of the ox that treadeth out the corn; and why should not the same generous liberality be extended to this useful family of birds, which forms so powerful a phalanx against the inroads of many millions of destructive vermin.

The Red-headed Woodpecker is, properly speaking, a bird of passage; though even in the Eastern States, individuals are found during moderate winters, as well as in the states of New York and Pennsylvania; in Carolina they are somewhat more numerous during that season; but not one-tenth of what are found in summer. They make their appearance in Pennsylvania about the first of May; and leave us about the middle of October. They inhabit from Canada to the Gulf of Mexico, and are also found on the western coast of North America. About the middle of May they begin to construct their nests, which, like the rest of the genus, they form in the body, or large limbs, of trees, taking in no materials, but smoothing it within to the proper shape and size. The female lays six eggs, of a pure white; and the young make their first appearance about the twentieth of June. During the first season, the head and neck of the young birds are blackish gray, which has occa-

* In one place, on a tract of two thousand acres of pine land, on the Sampit river, near Georgetown, at least ninety trees in every hundred were destroyed by this pernicious insect, a small, black, winged bug, resembling the weevil, but somewhat longer.

sioned some European writers to mistake them for females; the white on the wing is also spotted with black; but in the succeeding spring they receive their perfect plumage, and the male and female then differ only in the latter being rather smaller, and her colors not quite so vivid; both have the head and neck deep scarlet; the bill light blue, black towards the extremity, and strong; back, primaries, wing-coverts and tail, black, glossed with steel blue; rump, lower part of the back, secondaries, and whole under parts, from the breast downwards, white; legs and feet bluish green; claws light blue; round the eye a dusky narrow skin, bare of feathers; iris dark hazel; total length nine inches and a half, extent seventeen inches. The figure in the plate was drawn and colored from a very elegant living specimen.

Notwithstanding the care which this bird, in common with the rest of its genus, takes to place its young beyond the reach of enemies, within the hollows of trees; yet there is one deadly foe, against whose depredations neither the height of the tree, nor the depth of the cavity, is the least security. This is the Black Snake (*Coluber constrictor*), who frequently glides up the trunk of the tree, and, like a skulking savage, enters the Woodpecker's peaceful apartment, devours the eggs or helpless young, in spite of the cries and flutterings of the parents; and, if the place be large enough, coils himself up in the spot they occupied, where he will sometimes remain for several days. The eager school-boy, after hazarding his neck to reach the Woodpecker's hole, at the triumphant moment when he thinks the nestlings his own, and strips his arm, lanching it down into the cavity, and grasping what he conceives to be the callow young, starts with horror at the sight of a hideous snake, and almost drops from his giddy pinnacle, retreating down the tree with terror and precipitation. Several adventures of this kind have come to my knowledge; and one of them that was attended with serious consequences; where both snake and boy fell to the ground; and a broken thigh, and long confinement, cured the adventurer completely of his ambition for robbing Woodpeckers' nests.

SPECIES V. *PICUS VARIUS*.

YELLOW-BELLIED WOODPECKER.

[Plate IX. Fig. 2.]

Picus varius, LINN. *Syst.* I., 176, 20.—GMEL. *Syst.* I., 438.—*Le pic varie de la Caroline*, BUFF. VII., 77. *Pl. Enl.* 785.—*Yellow-bellied Woodpecker*, CATESB. I., 21.—*Arct. Zool.* II., No. 166.—LATH. *Syn.* II., 574, 20. *Id.* Sup. p. 109.

THIS beautiful species is one of our resident birds. It visits our orchards in the month of October, in great numbers; is occasionally seen during the whole winter and spring; but seems to seek the depths of the forest, to rear its young in; for during summer, it is rarely seen among our settlements; and even in the intermediate woods, I have seldom met with it in that season. According to Brisson, it inhabits the continent from Cayenne to Virginia; and I may add, as far as to Hudson's Bay; where according to Hutchins, they are called *Mekisewe Paupastaow*;* they are also common in the states of Kentucky and Ohio, and have been seen in the neighborhood of St. Louis. They are reckoned by Georgi, among the birds that frequent the Lake Baikal, in Asia,† but their existence there has not been satisfactorily ascertained.

The habits of this species are similar to those of the Hairy and Downy Woodpeckers, with which it generally associates; and which are both represented in the same plate. The only nest of this bird which I have met with, was in the body of an old pear-tree, about ten or eleven feet from the ground. The hole was almost exactly circular, small for the size of the bird, so that it crept in and out with difficulty, but suddenly widened, descending by a small angle, and then running downwards about fifteen inches. On the smooth solid wood lay four white eggs. This was about the twenty-fifth of May. Having no opportunity of visiting it afterwards, I cannot say whether it added any more eggs to the number; I rather think it did not, as it appeared, at that time, to be sitting.

The Yellow-bellied Woodpecker is eight inches and a half long, and in extent fifteen inches; whole crown a rich and deep scarlet, bordered with black on each side, and behind forming a slight crest, which it frequently erects;‡ from the nostrils, which are thickly covered with

* Latham.

† Ibid.

‡ This circumstance seems to have been overlooked by naturalists.

recumbent hairs, a narrow strip of white runs downward, curving round the breast, mixing with the yellowish white on the lower part of the breast; throat the same deep scarlet as the crown, bordered with black, proceeding from the lower mandible on each side, and spreading into a broad rounding patch on the breast; this black, in birds of the first and second year, is dusky gray, the feathers being only crossed with circular touches of black; a line of white, and below it another of black, proceed, the first from the upper part of the eye, the other from the posterior half of the eye, and both lose themselves on the neck and back; back dusky yellow, sprinkled and elegantly waved with black; wings black, with a large oblong spot of white; the primaries tipped and spotted with white; the three secondaries, next the body, are also variegated with white; rump white, bordered with black; belly yellow; sides under the wings more dusky yellow, marked with long arrow-heads of black; legs and feet greenish blue; tail black, consisting of ten feathers, the two outward feathers, on each side tipped with white, the next totally black, the fourth edged on its inner vane, half way down, with white, the middle one white on its interior vane, and spotted with black; tongue flat, horny for half an inch at the tip, pointed, and armed along its sides with reflected barbs; the other extremities of the tongue pass up behind the skull in a groove, and end near the right nostril; in birds of the first and second year, they reach only to the crown; bill an inch long, channelled, wedge-formed at the tip, and of a dusky horn color. The female is marked nearly as the male, but wants the scarlet on the throat, which is whitish; she is also darker under the wings, and on the sides of the breast. The young of the first season, of both sexes, in October, have the crown sprinkled with black and deep scarlet; the scarlet on the throat may be also observed in the young males. The principal food of these birds is insects; and they seem particularly fond of frequenting orchards, boring the trunks of the apple-trees, in their eager search after them. On opening them, the liver appears very large, and of a dirty gamboge color; the stomach strongly muscular, and generally filled with fragments of beetles and gravel. In the morning they are extremely active in the orchards, and rather shy than the rest of their associates. Their cry is also different, but though it is easily distinguishable in the woods, cannot be described by words.

SPECIES VI. *PICUS VILLOSUS*.

HAIRY WOODPECKER.

[Plate IX. Fig. 3.]

Picus villosus, LINN. *Syst.* I., 175, 16.—*Pic chevelu de Virginie*, BUFFON, VII. 74.—*Pic varie mâle de Virginie*, Pl. enl. 754.—*Hairy Woodpecker*, CATESBY, I., 13, fig. 2.—*Arct. Zool.* II., No. 164.—LATH. *Syn.* II., 572, 18. Id. Sup. 108.

THIS is another of our resident birds, and, like the former, a hunter of orchards, and borer of apple-trees, an eager hunter of insects, their eggs and larvæ, in old stumps, and old rails, in rotten branches, and crevices of the bark; having all the characters of the Woodpecker strongly marked. In the month of May, he retires with his mate to the woods, and either seeks out a branch already hollow, or cuts out an opening for himself. In the former case, I have known his nest more than five feet distant from the mouth of the hole; and in the latter, he digs first horizontally, if in the body of the tree, six or eight inches, and then downwards, obtusely, for twice that distance; carrying up the chips with his bill, and scraping them out with his feet. They also not unfrequently choose the orchard for breeding in; and even an old stake of the fence, which they excavate for this purpose. The female lays five white eggs, and hatches in June. This species is more numerous than the last in Pennsylvania, and more domestic; frequently approaching the farm-house, and skirts of the town. In Philadelphia, I have many times observed them examining old ragged trunks of the willow and poplar, while people were passing immediately below. Their cry is strong, shrill and tremulous; they have also a single note or *chuck*, which they often repeat, in an eager manner, as they hop about, and dig into the crevices of the trees. They inhabit the continent, from Hudson's Bay to Carolina and Georgia.

The Hairy Woodpecker is nine inches long, and fifteen in extent; crown black; line over and under the eye white; the eye is placed in a black line, that widens as it descends to the back; hind-head scarlet, sometimes intermixed with black; nostrils hid under remarkably thick, bushy, recumbent hairs or bristles; under the bill are certain long hairs thrown forward, and upwards, as represented in the figure; bill a bluish horn color, grooved, wedged at the end, straight, and about an inch and a quarter long; touches of black, proceeding from the lower mandible, end in a broad black stripe, that joins the black on the shoulder;

back black, divided by a broad lateral strip of white, the feathers composing which are loose and unwebbed, resembling hairs, whence its name; rump and shoulders of the wing, black; wings black, tipped and spotted with white, three rows of spots being visible on the secondaries, and five on the primaries; greater wing-coverts also spotted with white; tail as in the others, cuneiform, consisting of ten strong-shafted and pointed feathers, the four middle ones black, the next partially white, the two exterior ones white, tinged at the tip with a brownish burnt color; tail-coverts black; whole lower side pure white; legs, feet and claws, light blue, the latter remarkably large and strong; inside of the mouth flesh-colored; tongue pointed, beset with barbs, and capable of being protruded more than an inch and a half; the *os hyoides*, in this species, pass on each side of the neck, ascend the skull, pass down toward the nostril, and are wound round the bone of the right eye, which projects considerably more than the left for its accommodation. The great mass of hairs, that cover the nostril, appears to be designed as a protection to the front of the head, when the bird is engaged in digging holes into the wood. The membrane, which encloses the brain, in this, as in all the other species of Woodpeckers, is also of extraordinary strength, no doubt to prevent any bad effects from violent concussion, while the bird is employed in digging for food. The female wants the red on the hind-head; and the white below is tinged with brownish. The manner of flight of these birds has been already described, under a former species, as consisting of alternate risings and sinkings. The Hairy Woodpeckers generally utter a loud tremulous scream, as they set off, and when they alight. They are hard to kill, and, like the Red-headed Woodpecker, hang by the claws, even of a single foot, as long as a spark of life remains, before they drop.

This species is common at Hudson's Bay; and has lately been found in England. Dr. Latham examined a pair, which were shot near Halifax, in Yorkshire; and on comparing the male with one brought from North America, could perceive no difference, but in a slight interruption of the red that marked the hind-head of the former; a circumstance which I have frequently observed in our own. The two females corresponded exactly.

SPECIES VII. *PICUS PUBESCENS.*

DOWNY WOODPECKER.

[Plate IX. Fig. 4.]

Picus pubescens, LINN. *Syst.* I., 175, 15.—GMEL. *Syst.* I., 435.—*Petit Pic varie de Virginie*, BUFFON, VII., 76.—*Smallest Woodpecker*, CATESB. I., 21.—*Arct. Zool.* II., No. 165.—*Little Woodpecker*, LATH. *Syn.* II., 573, 19. *Id.* Sup. 109.

THIS is the smallest of our Woodpeckers, and so exactly resembles the former in its tints and markings, and in almost everything, except its diminutive size, that I wonder how it passed through the Count de Buffon's hands, without being branded as "a spurious race, degenerated by the influence of food, climate, or some unknown cause." But though it has escaped this infamy, charges of a much more heinous nature have been brought against it, not only by the writer above-mentioned, but by the whole venerable body of zoologists in Europe, who have treated of its history, viz. that it is almost constantly boring and digging into apple-trees; and that it is the most destructive of its whole genus to the orchards. The first part of this charge I shall not pretend to deny; how far the other is founded in truth will appear in the sequel. Like the two former species, it remains with us the whole year. About the middle of May, the male and female look out for a suitable place for the reception of their eggs and young. An apple, pear or cherry tree, often in the near neighborhood of the farm-house, is generally pitched upon for this purpose. The tree is minutely reconnoitred for several days, previous to the operation, and the work is first begun by the male, who cuts out a hole in the solid wood, as circular as if described with a pair of compasses. He is occasionally relieved by the female, both parties working with the most indefatigable diligence. The direction of the hole, if made in the body of the tree, is generally downwards, by an angle of thirty or forty degrees, for the distance of six or eight inches, and then straight down for ten or twelve more; within roomy, capacious, and as smooth as if polished by the cabinet-maker; but the entrance is judiciously left just so large as to admit the body of the owner. During this labor, they regularly carry out the chips, often strewing them at a distance to prevent suspicion. This operation sometimes occupies the chief part of a week. Before she begins to lay, the female often visits the place, passes out and in, examines every part, both of the exterior and interior, with great attention, as every pru-

(183)

dent tenant of a new house ought to do, and at length takes complete possession. The eggs are generally six, pure white, and laid on the smooth bottom of the cavity. The male occasionally supplies the female with food, while she is sitting; and about the last week in June, the young are perceived making their way up the tree, climbing with considerable dexterity. All this goes on with great regularity, where no interruption is met with; but the House Wren, who also builds in the hollow of a tree, but who is neither furnished with the necessary tools, nor strength for excavating such an apartment for himself, allows the Woodpeckers to go on, till he thinks it will answer his purpose, then attacks him with violence and generally succeeds in driving them off. I saw, some weeks ago, a striking example of this, where the Woodpeckers we are now describing, after commencing in a cherry-tree, within a few yards of the house, and having made considerable progress, were turned out by the Wren: the former began again on a pear-tree in the garden, fifteen or twenty yards off, whence, after digging out a most complete apartment, and one egg being laid, they were once more assaulted by the same impertinent intruder, and finally forced to abandon the place.

The principal characteristics of this little bird are diligence, familiarity, perseverance, and a strength and energy in the head, and muscles of the neck, which are truly astonishing. Mounted on the infected branch of an old apple-tree, where insects have lodged their corroding and destructive brood, in the crevices between the bark and wood, he labors, sometimes for half an hour, incessantly at the same spot, before he has succeeded in dislodging and destroying them. At these times you may walk up pretty close to the tree, and even stand immediately below it, within five or six feet of the bird, without in the least embarrassing him; the strokes of his bill are distinctly heard several hundred yards off; and I have known him to be at work for two hours together on the same tree. Buffon calls this, "incessant toil and slavery,"—their attitude, "a painful posture,"—and their life, "a dull and insipid existence;" expressions improper, because untrue; and absurd, because contradictory. The posture is that for which the whole organization of his frame is particularly adapted; and though to a Wren, or a Humming-bird, the labor would be both toil and slavery, yet to him it is, I am convinced, as pleasant, and as amusing, as the sports of the chase to the hunter, or the sucking of flowers to the Humming-bird. The eagerness with which he traverses the upper and lower sides of the branches; the cheerfulness of his cry, and the liveliness of his motions while digging into the tree, and dislodging the vermin, justify this belief. He has a single note, or *chink*, which, like the former species, he frequently repeats. And when he flies off, or alights on another tree, he utters a rather shriller cry, composed

of nearly the same kind of note, quickly reiterated. In fall and winter, he associates with the Titmouse, Creeper, &c., both in their wood and orchard excursions; and usually leads the van. Of all our Woodpeckers, none rid the apple-trees of so many vermin as this, digging off the moss, which the negligence of the proprietor had suffered to accumulate, and probing every crevice. In fact, the orchard is his favorite resort in all seasons; and his industry is unequalled, and almost incessant, which is more than can be said of any other species we have. In fall, he is particularly fond of boring the apple-trees for insects, digging a circular hole through the bark, just sufficient to admit his bill, after that a second, third, &c., in pretty regular horizontal circles round the body of the tree; these parallel circles of holes are often not more than an inch, or an inch and a half, apart, and sometimes so close together, that I have covered eight or ten of them at once with a dollar. From nearly the surface of the ground, up to the first fork, and sometimes far beyond it, the whole bark of many apple-trees is perforated in this manner, so as to appear as if made by successive discharges of buck-shot; and our little Woodpecker, the subject of the present account, is the principal perpetrator of this supposed mischief. I say *supposed*, for so far from these perforations of the bark being ruinous, they are not only harmless, but, I have good reason to believe, really beneficial to the health and fertility of the tree. I leave it to the philosophical botanist to account for this; but the fact I am confident of. In more than fifty orchards, which I have myself carefully examined, those trees which were marked by the Woodpecker (for some trees they never touch, perhaps because not penetrated by insects), were uniformly the most thriving, and seemingly the most productive; many of these were upwards of sixty years old, their trunks completely covered with holes, while the branches were broad, luxuriant, and loaded with fruit. Of *decayed* trees, more than three-fourths were untouched by the Woodpecker. Several intelligent farmers, with whom I have conversed, candidly acknowledge the truth of these observations, and with justice look upon these birds as beneficial; but the most common opinion is, that they bore the tree to suck the sap, and so destroy its vegetation; though pine and other resinous trees, on the juices of which it is not pretended they feed, are often found equally perforated. Were the *sap* of the tree their object, the saccharine juice of the birch, the sugar-maple, and several others, would be much more inviting, because more sweet and nourishing, than that of either the pear or apple-tree; but I have not observed one mark on the former, for ten thousand that may be seen on the latter; besides, the early part of spring is the season when the sap flows most abundantly; whereas it is only during the months of September, October, and November, that Woodpeckers are seen so indefatigably engaged in orchards, probing

every crack and crevice, boring through the bark, and, what is worth remarking, chiefly on the south and south-west sides of the tree, for the eggs and larvæ deposited there, by the countless swarms of summer insects. These, if suffered to remain, would prey upon the very vitals, if I may so express it, of the tree, and in the succeeding summer, give birth to myriads more of their race, equally destructive.

Here then is a whole species, I may say genus, of birds, which Providence seems to have formed for the protection of our fruit and forest trees, from the ravages of vermin; which every day destroy millions of those noxious insects, that would otherwise blast the hopes of the husbandman; and which even promote the fertility of the tree; and, in return, are proscribed by those who ought to have been their protectors; and incitements and rewards held out for their destruction! Let us examine better into the operations of nature, and many of our mistaken opinions, and groundless prejudices, will be abandoned for more just, enlarged, and humane modes of thinking.

The length of the Downy Woodpecker is six inches and three-quarters, and its extent twelve inches; crown black; hind-head deep scarlet; stripe over the eye white; nostrils thickly covered with recumbent hairs, or small feathers, of a cream color: these, as in the preceding species, are thick and bushy, as if designed to preserve the forehead from injury during the violent action of digging; the back is black, and divided by a lateral strip of white, loose, downy, unwebbed feathers; wings black, spotted with white; tail-coverts, rump, and four middle feathers of the tail, black; the other three on each side white, crossed with touches of black; whole under parts, as well as the sides of the neck, white; the latter marked with a streak of black, proceeding from the lower mandible, exactly as in the Hairy Woodpecker; legs and feet bluish green; claws light blue, tipped with black; tongue formed like that of the preceding species, horny towards the tip, where for one-eighth of an inch it is barbed; bill of a bluish horn color, grooved, and wedge-formed, like most of the genus; eye dark hazel. The female wants the red on the hind-head, having that part white; and the breast and belly are of a dirty white.

This, and the two former species, are generally denominated *Sapsuckers*; they have also several other provincial appellations, equally absurd, which it may, perhaps, be more proper to suppress, than to sanction by repeating.

SPECIES VIII. *PICUS QUERULUS*.

RED-COCKADED WOODPECKER.

[Plate XV. Fig. 1.]

THIS new species I first discovered in the pine woods of North Carolina. The singularity of its voice, which greatly resembles the chirping of young nestlings, and the red streak on the side of its head, suggested the specific name I have given it. It also extends through South Carolina and Georgia, at least as far as the Altamaha river. Observing the first specimen I found to be so slightly marked with red, I suspected it to be a young bird, or imperfect in its plumage, but the great numbers I afterwards shot, satisfied me that this is a peculiarity of the species. It appeared exceedingly restless, active, and clamorous; and everywhere I found its manners the same.

This bird seems to be an intermediate link between the Red-bellied and the Hairy Woodpecker, represented in Plates VII. and IX. of this work. It has the back of the former, and the white belly and spotted neck of the latter; but wants the breadth of red in both, and is less than either. A preserved specimen has been deposited in the Museum of this city.

This Woodpecker is seven inches and a half long, and thirteen broad; the upper part of the head is black; the back barred with twelve white, transversely, semicircular lines, and as many of black, alternately; the cheeks and sides of the neck are white; whole lower parts the same; from the lower mandible, a list of black passes towards the shoulder of the wing, where it is lost in small black spots on each side of the breast; the wings are black, spotted with white; the four middle tail feathers black, the rest white spotted with black; rump black, variegated with white; the vent white, spotted with black; the hairs that cover the nostrils are of a pale cream color; the bill deep slate; but what forms the most distinguishing peculiarity of this bird, is a fine line of vermilion, on each side of the head, seldom occupying more than the edge of a single feather. The female is destitute of this ornament; but in the rest of her plumage differs in nothing from the male. The iris of the eye, in both, was hazel.

The stomachs of all those I opened were filled with small black insects, and fragments of large beetles. The posterior extremities of the tongue reached nearly to the base of the upper mandible.

SPECIES IX. *PICUS TORQUATUS*.

LEWIS'S WOODPECKER.

[Plate XX. Fig. 3.]

OF this very beautiful, and singularly marked, species, I am unable to give any farther account than as relates to its external appearance. Several skins of this species were preserved; all of which I examined with care; and found little or no difference among them, either in the tints or disposition of the colors.

The length of this was eleven inches and a half; the back, wings, and tail, were black, with a strong gloss of green; upper part of the head the same; front, chin, and cheeks, beyond the eyes, a dark rich red; round the neck passes a broad *collar* of white, which spreads over the breast, and looks as if the fibres of the feathers had been silvered; these feathers are also of a particular structure, the fibres being separate, and of a hair-like texture; belly deep vermilion, and of the same strong hair-like feathers, intermixed with silvery ones; vent black; legs and feet dusky, inclining to greenish blue; bill dark horn color.

For a more particular, and, doubtless, a more correct account of this, and the two preceding species,* the reader is referred to General Clark's History of the Expedition, now preparing for the press. The three birds I have here introduced, are but a small part of the valuable collection of new subjects in natural history, discovered, and preserved, amidst a thousand dangers and difficulties, by those two enterprising travellers, whose intrepidity was only equalled by their discretion, and by their active and laborious pursuit of whatever might tend to render their journey useful to science and to their country. It was the request, and particular wish, of Captain Lewis, made to me in person, that I should make drawings of such of the feathered tribes as had been preserved, and were new. That brave soldier, that amiable and excellent man, over whose solitary grave in the wilderness I have since shed tears of affliction, having been cut off in the prime of his life, I hope I shall be pardoned for consecrating this humble note to his memory, until a more able pen shall do better justice to the subject.

* Wilson here alludes to Clark's Crow, and the Louisiana Tanager, both of which are figured in the same plate with Lewis's Woodpecker.

SPECIES X. *PICUS CAROLINUS*.

RED-BELLIED WOODPECKER.

[Plate VII. Fig. 2.]

Picus Carolinus, LINN. *Syst.* I., 174, 10.—*Pic varie de la Jamaïque*, BUFFON, VII., 72, *Pl. Enl.* 597.—*Picus varius medius Jamaicensis*, SLOAN. *Jam.* 299, 15.—*Jamaica Woodpecker*, EDW. 244.—CATESB. I., 19, fig. 2.—*Arct. Zool.* II., No. 161.—LATH. *Syn.* II., 570, 17. *Id.* 571, 17. *A. Id. B.*—*Pic raye de la Louisiane*, BUFF. VII., 73, *Pl. Enl.* 692.

THIS species possesses all the restless and noisy habits so characteristic of its tribe. It is more shy, and less domestic, than the Red-headed Woodpecker, (*P. erythrocephalus*), or any of the other spotted Woodpeckers. It is also more solitary. It prefers the largest, high-timbered woods, and tallest decayed trees of the forest; seldom appearing near the ground, on the fences, or in orchards, or open fields; yet where the trees have been deadened, and stand pretty thick, in fields of Indian corn, as is common in new settlements, I have observed it to be very numerous; and have found its stomach sometimes completely filled with that grain. Its voice is hoarser than any of the others; and its usual note, *chow*, has often reminded me of the barking of a little lap-dog. It is a most expert climber, possessing extraordinary strength in the muscles of its feet and claws, and moves about the body, and horizontal limbs, of the trees, with equal facility in all directions. It rattles, like the rest of the tribe, on the dead limbs, and with such violence as to be heard, in still weather, more than half a mile off; and listens to hear the insects it has alarmed. In the lower side of some lofty branch, that makes a considerable angle with the horizon, the male and female, in conjunction, dig out a circular cavity for their nest, sometimes out of the solid wood, but more generally into a hollow limb, twelve or fifteen inches above where it becomes solid. This is usually performed early in April. The female lays five eggs, of a pure white, or almost semi-transparent; and the young generally make their appearance towards the latter end of May, or beginning of June, climbing up to the higher parts of the tree, being as yet unable to fly. In this situation they are fed for several days, and often become the prey of the Hawks. From seeing the old ones continuing their caresses after this period, I believe that they often, and perhaps always, produce two broods in a season. During the greater part of the summer, the young have the ridge of the

neck and head of a dull brownish ash; and a male of the third year has received his complete colors.

The Red-bellied Woodpecker is ten inches in length, and seventeen in extent; the bill is nearly an inch and a half in length, wedged at the point, but not quite so much grooved as some others, strong, and of a bluish-black color; the nostrils are placed in one of these grooves, and covered with curving tufts of light brown hairs, ending in black points; the feathers on the front stand more erect than usual, and are of a dull yellowish red; from thence along the whole upper part of the head and neck, down the back, and spreading round to the shoulders, is of the most brilliant golden glossy red; the whole cheeks, line over the eye, and under side of the neck, is a pale buff color, which on the breast and belly deepens into a yellowish ash, stained on the belly with a blood red; the vent and thigh feathers are dull white, marked down their centres with heart-formed, and long arrow-pointed, spots of black. The back is black, crossed with transverse curving lines of white; the wings are also black, the lesser wing-coverts circularly tipped, and the whole primaries and secondaries beautifully crossed with bars of white, and also tipped with the same; the rump is white, interspersed with touches of black; the tail-coverts white near their extremities; the tail consists of ten feathers, the two middle ones black, their interior webs or vanes white, crossed with diagonal spots of black; these, when the edges of the two feathers just touch, coincide, and form heart-shaped spots; a narrow sword-shaped line of white runs up the exterior side of the shafts of the same feathers; the next four feathers, on each side, are black, the outer edges of the exterior ones barred with black and white, which, on the lower side, seems to cross the whole vane as in the figure; the extremities of the whole tail, except the outer feather, are black, sometimes touched with yellowish or cream color; the legs and feet are of a bluish green, and the iris of the eye red. The tongue, or *os hyoides*, passes up over the hind-head, and is attached by a very elastic retractile membrane, to the base of the right nostril; the extremity of the tongue is long, horny, very pointed, and thickly edged with barbs, the other part of the tongue is worm-shaped. In several specimens, I found the stomach nearly filled with pieces of a species of fungus, that grows on decayed wood, and in all with great numbers of insects, seeds, gravel, &c. &c. The female differs from the male, in having the crown, for an inch, of a fine ash, and the black not so intense; the front is reddish as in the male, and the whole hind-head, down to the back, likewise of the same rich red as his. In the bird, from which this latter description was taken, I found a large cluster of minute eggs, to the number of fifty or upwards, in the beginning of the month of March.

This species inhabits a large extent of country, in all of which it

seems to be resident, or nearly so. I found them abundant in Upper Canada, and in the northern parts of the state of New York, in the month of November; they also inhabit the whole Atlantic states as far as Georgia, and the southern extremity of Florida; as well as the interior parts of the United States, as far west as Chillicothe, in the state of Ohio, and, according to Buffon, Louisiana. They are said to be the only Woodpeckers found in Jamaica; though I question whether this be correct; and to be extremely fond of the capsicum, or Indian pepper.* They are certainly much hardier birds, and capable of subsisting on coarser, and more various fare, and of sustaining a greater degree of cold, than several others of our Woodpeckers. They are active and vigorous; and being almost continually in search of insects, that injure our forest trees, do not seem to deserve the injurious epithets that almost all writers have given them. It is true, they frequently perforate the timber in pursuit of these vermin, but this is almost always in dead and decaying parts of the tree, which are the nests and nurseries of millions of destructive insects. Considering matters in this light I do not think their services overpaid by all the ears of Indian corn they consume; and would protect them within my own premises as being more useful than injurious.

GENUS XXV. SITTA. NUTHATCH.

SPECIES I. *S. CAROLINENSIS*.

WHITE-BREASTED NUTHATCH.

[Plate II. Fig. 3.]

Sitta Carolinensis, BRISS. III., p. 596.—CATESB. I., 22, fig. 2.—LATH. I., 650, B.—*Sitta Europea*, Gray black-capped Nuthatch, BARTRAM, p. 289.

THE bill of this bird is black, the upper mandible straight, the lower one rounded upwards, towards the point, and white near the base; the nostrils are covered with long curving black hairs; the tongue is of a horny substance, and ending in several sharp points; the general color above is of a light blue or lead; the tail consists of twelve feathers, the two middle ones lead color, the next three are black, tipped with white for one-tenth, one-fourth, and half of an inch; the two next are also black, tipped half an inch or more with white, which runs nearly an inch up their exterior edges, and both have the white at the tips touched with black; the legs are of a purple or dirty flesh color; the

* Sloane.

hind claw is much the largest; the inside of the wing at the bend is black; below this is a white spot spreading over the roots of the first five primaries; the whole length is five inches and a half, extent eleven.

Mr. Pennant considers this bird as a mere variety of the European Nuthatch; but if difference in size, color and habits, be sufficient characteristics of a distinct species, this bird is certainly entitled to be considered as such. The head and back of the European species is of a uniform bluish gray; the upper parts of the head, neck, and shoulders of ours are a deep black, glossed with green; the breast and belly of the former is a dull orange, with streaks of chestnut, those parts in the latter are pure white. The European has a line of black passing through the eye, half way down the neck; the present species has nothing of the kind; but appears with the inner webs of the three shortest secondaries, and the primaries, of a jet black; the latter tipped with white, and the vent and lower parts of the thighs of a rust color; the European therefore, and the present, are evidently two distinct and different species.

This bird builds its nest early in April, in the hole of a tree; in a hollow rail in the fence; and sometimes in the wooden cornice under the eaves; and lays five eggs, of a dull white, spotted with brown at the greater end. The male is extremely attentive to the female while sitting, supplying her regularly with sustenance, stopping frequently at the mouth of the hole, calling and offering her what he has brought, in the most endearing manner. Sometimes he seems to stop merely to inquire how she is, and to lighten the tedious moments with his soothing chatter. He seldom rambles far from the spot, and when danger appears, regardless of his own safety, he flies instantly to alarm her. When both are feeding on the trunk of the same tree, or of adjoining ones, he is perpetually calling on her; and, from the momentary pause he makes, it is plain that he feels pleased to hear her reply.

The White-breasted Nuthatch is common almost everywhere in the woods of North America; and may be known at a distance by the notes *quank, quank*, frequently repeated, as he moves upward and down, in spiral circles, around the body, and larger branches, of the tree, probing behind the thin scaly bark of the white-oak, and shelling off considerable pieces of it, in search after spiders, ants, insects and their larvæ. He rests and roosts with his head downwards; and appears to possess a degree of curiosity not common to many birds; frequently descending, very silently, within a few feet of the root of the tree where you happen to stand, stopping, head downward, stretching out his neck in a horizontal position, as if to reconnoitre your appearance; and after several minutes of silent observation, wheeling round, he again mounts, with fresh activity, piping his unisons as before. Strongly attached to his native forests, he seldom forsakes them; and amidst the

rigors of the severest winter weather, his note is still heard in the bleak and leafless woods, and among the howling branches. Sometimes the rain, freezing as it falls, encloses every twig, and even the trunk of the tree, in a hard transparent coat or shell of ice. On these occasions, I have observed his anxiety and dissatisfaction, at being with difficulty able to make his way along the smooth surface; at these times generally abandoning the trees, gleaning about the stables around the house, mixing among the fowls, entering the barn, and examining the beams and rafters, and every place where he may pick up a subsistence.

The name Nuthatch has been bestowed on this family of birds from their supposed practice of breaking nuts by repeated hatchings, or hammerings with their bills. Soft-shelled nuts, such as chestnuts, chinkopins, and hazel-nuts, they may probably be able to demolish, though I have never yet seen them so engaged; but it must be rather in search of maggots that sometimes breed there, than for the kernel. It is however said that they lay up a large store of nuts for winter; but as I have never either found any of their magazines, or seen them collecting them, I am inclined to doubt the fact. From the great numbers I have opened at all seasons of the year, I have every reason to believe that ants, small seeds, insects and their larvæ, form their chief subsistence, such matters alone being uniformly found in their stomachs. Neither can I see what necessity they could have to circumambulate the trunks of trees, with such indefatigable and restless diligence, while bushels of nuts lay scattered round their roots. As to the circumstance mentioned by Dr. Plott, of the European Nuthatch "putting its bill into a crack in the bough of a tree, and making such a violent sound, as if it was rending asunder," this, if true, would be sufficient to distinguish it from the species we have been just describing, which possesses no such faculty. The female differs little from the male in color, chiefly in the black being less deep on the head and wings.

SPECIES II. *SITTA VARIA*.

RED-BELLIED NUTHATCH.

[Plate II. Fig. 4.]

Sitta Canadensis, BRISS. III., p. 592.—*Small Nuthatch*, LATH. I., 651.—*Sitta Varia*, BART. p. 289.

THIS bird is much smaller than the last, measuring only four inches and a half in length, and eight inches in extent. In the form of its bill, tongue, nostrils, and in the color of the back and tail-feathers, it exactly agrees with the former; the secondaries are not relieved with the deep black of the other species, and the legs, feet, and claws, are of a dusky greenish yellow; the upper part of the head is black, bounded by a stripe of white passing round the frontlet; a line of black passes through the eye to the shoulder; below this is another line of white; the chin is white; the other under parts a light rust color; the primaries and whole wings a dusky lead color. The breast and belly of the female is not of so deep a brown, and the top of the head less intensely black.

This species is migratory, passing from the north, where they breed, to the southern states in October, and returning in April. Its voice is sharper, and its motions much quicker than those of the other, being so rapid, restless and small, as to make it a difficult point to shoot one of them. When the two species are in the woods together, they are easily distinguished by their voices, the note of the least being nearly an octave sharper than that of its companion, and repeated more hurriedly. In other respects their notes are alike unmusical and monotonous. Approaching so near to each other in their colors and general habits, it is probable that their mode of building, &c., may be also similar.

* Buffon's *Torchepot du Canada*, Canada Nuthatch of other European writers, is either a young bird of the present species, in its imperfect plumage, or a different sort that rarely visits the United States. If the figure (Pl. Enl. 623) be correctly colored, it must be the latter, as the tail and head appear of the same bluish gray or lead color as the back. The young birds of this species, it may be observed, have also the crown of a lead color during the first season; but the tail-feathers are marked nearly as those of the old ones. Want of precision in the figures and descriptions of these authors, makes it difficult to determine; but I think it very probable, that *Sitta Jamaicensis minor*, Briss.; the Least

Loggerhead of Brown, *Sitta Jamaicensis*, Linn.; and *Sitta Canadensis* of Linn., Gmel., and Briss., are names that have been originally applied to different individuals of the species we are now describing.

This bird is particularly fond of the seeds of pine-trees. You may traverse many thousand acres of oak, hickory and chestnut woods, during winter, without meeting with a single individual; but no sooner do you enter among the pines than, if the air be still, you have only to listen for a few moments, and their note will direct you where to find them. They usually feed in pairs, climbing about in all directions, generally accompanied by the former species, as well as by the Black-capped Titmouse, *Parus atricapillus*, and the Crested Titmouse, *Parus bicolor*, and not unfrequently by the small Spotted Woodpecker, *Picus pubescens*; the whole company proceeding regularly from tree to tree through the woods, like a corps of pioneers; while in a calm day the rattling of their bills, and the rapid motions of their bodies, thrown like so many tumblers and rope-dancers into numberless positions, together with the peculiar chatter of each, are altogether very amusing; conveying the idea of hungry diligence, bustle and activity. Both these little birds, from the great quantity of destructive insects and larvæ they destroy, both under the bark, and among the tender buds of our fruit and forest trees, are entitled to, and truly deserving of, our esteem and protection.

SPECIES III. *SITTA PUSILLA*.

BROWN-HEADED NUTHATCH.

[Plate XV. Fig. 2.]

Sitta pusilla, LATH. *Ind. Orn.* 263.—*Small Nuthatch*, CATESBY, *Car.* I., 22, upper figure.—*La Petite Sittelle à tête brune*, BUFF. V., 474.—BRISS. III., 598.—LATH. I., 651, C.

THIS bird is chiefly an inhabitant of Virginia, and the southern states, and seems particularly fond of pine-trees. I have never yet discovered it either in Pennsylvania, or any of the regions north of this. Its manners are very similar to those of the Red-bellied Nuthatch, represented in Plate II. of this work; but its notes are more shrill and chirping. In the countries it inhabits it is a constant resident; and in winter associates with parties, of eight or ten, of its own species, who hunt busily from tree to tree, keeping up a perpetual screeching. It is a frequent companion of the Woodpecker figured beside it; and you rarely find the one in the woods without observing or hearing the other

not far off. It climbs equally in every direction, on the smaller branches, as well as on the body of the tree, in search of its favorite food, small insects and their larvæ. It also feeds on the seeds of the pine-tree. I have never met with its nest.

This species is four inches and a quarter long, and eight broad; the whole upper part of the head and neck, from the bill to the back, and as far down as the eyes, is light brown, or pale ferruginous, shaded with darker touches, with the exception of a spot of white near the back; from the nostril through the eyes the brown is deepest, making a very observable line there; the chin, and sides of the neck, under the eyes, are white; the wings dusky; the coverts and three secondaries next the body a slate or lead color; which is also the color of the rest of the upper parts; the tail is nearly even at the end, the two middle feathers slate color, the others black, tipped with slate, and crossed diagonally with a streak of white; legs and feet dull blue; upper mandible black, lower blue at the base; iris hazel. The female differs in having the brown on the head rather darker, and the line through the eye less conspicuous.

This diminutive bird is little noticed in history, and what little has been said of it, by Europeans, is not much to its credit. It is characterized as "a very stupid bird," which may easily be knocked down, from the sides of the tree, with one's cane. I confess I found it a very dexterous climber; and so rapid and restless in its motions, as to be shot with difficulty. Almost all very small birds seem less suspicious of man than large ones; but that activity and restless diligence should constitute *stupidity*, is rather a new doctrine. Upon the whole, I am of opinion, that a person who should undertake the destruction of these birds, at even a dollar a head for all he knocked down with his cane, would run a fair chance of starving by his profession.

GENUS XXIV. *ALCEDO*. KINGFISHER.

SPECIES. *A. ALCYON*.

BELTED KINGFISHER.

[Plate XXIII. Fig. 1—Female.]

BARTRAM, p. 289.—TURTON, p. 278.*

THIS is a general inhabitant of the banks and shores of all our fresh-water rivers from Hudson's Bay to Mexico; and is the only species of its tribe found within the United States. This last circumstance, and its characteristic appearance, make it as universally known here, as its elegant little brother, the common Kingfisher of Europe, is in Britain. Like the love-lorn swains of whom poets tell us, he delights in murmuring streams and falling waters; not however merely that they may soothe his ear, but for a gratification somewhat more substantial. Amidst the roar of the cataract, or over the foam of a torrent, he sits perched upon an overhanging bough, glancing his piercing eye in every direction below for his scaly prey, which with a sudden circular plunge he sweeps from their native element, and swallows in an instant. His voice, which is not unlike the twirling of a watchman's rattle, is naturally loud, harsh, and sudden; but is softened by the sound of the brawling streams and cascades among which he generally rambles. He courses along the windings of the brook or river, at a small height above the surface, sometimes suspending himself by the rapid action of his wings, like certain species of Hawks, ready to pounce on the fry below; now and then settling on an old dead overhanging limb to reconnoitre. Mill-dams are particularly visited by this feathered fisher; and the sound of his pipe is as well known to the miller as the rattling of his own hopper. Rapid streams, with high perpendicular banks, particularly if they be of a hard clayey or sandy nature, are also favorite places of resort for this bird; not only because in such places the small fish are more exposed to view; but because those steep and dry banks are the chosen situations for his nest. Into these he digs with bill and claws, horizontally, sometimes to the extent of four or five feet, at the distance of a foot or two from the surface. The few materials he takes in are not always placed at the

* We add the following synonymes:—*Alcedo alcyon*, LINN. *Syst.* ed. 10, vol. I., 115.—GMEI. *Syst.* I., 451.—LATH. *Ind. Orn.* 257.—CATESBY, I., 69.—BUFF. *Pl. Enl.* 593–715.

extremity of the hole; that he and his mate may have room to turn with convenience. The eggs are five, pure white, and the first brood usually comes out about the beginning of June, and sometimes sooner, according to that part of the country where they reside. On the shores of Kentucky river, near the town of Frankfort, I found the female sitting early in April. They are very tenacious of their haunts, breeding for several successive years in the same hole, and do not readily forsake it, even though it be visited. An intelligent young gentleman informed me, that having found where a Kingfisher built, he took away its eggs, from time to time, leaving always one behind, until he had taken no less than eighteen from the same nest. At some of these visits, the female being within, retired to the extremity of the hole while he withdrew the egg, and next day, when he returned, he found she had laid again as usual.

The fabulous stories related by the ancients of the nest, manner of hatching, &c., of the Kingfisher, are too trifling to be repeated here. Over the winds and the waves the humble Kingfishers of our days, at least the species now before us, have no control. Its nest is neither constructed of glue nor fish-bones; but of loose grass and a few feathers. It is not thrown on the surface of the water to float about, with its proprietor, at random; but snugly secured from the winds and the weather in the recesses of the earth; neither is its head or its feathers believed, even by the most illiterate of our clowns and seamen, to be a charm for love, a protection against witchcraft, or a security for fair weather. It is neither venerated like those of the Society Isles, nor dreaded like those of some other countries; but is considered merely as a bird that feeds on fish; is generally fat; relished by *some* as good eating; and is now and then seen exposed for sale in our markets.

Though the Kingfisher generally remains with us, in Pennsylvania, until the commencement of cold weather, it is seldom seen here in winter; but returns to us early in April. In North and South Carolina, I observed numbers of these birds in the months of February and March. I also frequently noticed them on the shores of the Ohio, in February, as high up as the mouth of the Muskingum.

I suspect this bird to be a native of the Bahama Islands, as well as of our continent. In passing between these isles and the Florida shore, in the month of July, a Kingfisher flew several times round our ship, and afterwards shot off to the south.

The length of this species is twelve inches and a half, extent twenty; back and whole upper parts a light bluish slate color; round the neck is a collar of pure white, which reaches before to the chin; head large, crested, the feathers long and narrow, black in the centre, and generally erect; the shafts of all the feathers, except the white plumage, are black; belly and vent white; sides under the wings variegated with

blue; round the upper part of the breast passes a band of blue, interspersed with some light brown feathers; before the eye is a small spot of white, and another immediately below it; the bill is three inches long, from the point to the slit of the mouth, strong, sharp pointed, and black, except near the base of the lower mandible, and at the tip, where it is of a horn color; primaries, and interior webs of the secondaries, black, spotted with white; the interior vanes of the tail feathers elegantly spotted with white on a jet black ground; lower side light colored; exterior vanes blue; wing-coverts and secondaries marked with small specks of white; legs extremely short; when the bird perches it generally rests on the lower side of the second joint, which is thereby thick and callous; claws stout and black; whole leg of a dirty yellowish color; above the knee bare of feathers for half an inch; the two exterior toes united together for nearly their whole length.

The female is sprinkled all over with specks of white; the band of blue around the upper part of the breast is nearly half reddish brown; and a little below this passes a band of bright reddish bay, spreading on each side under the wings. The blue and rufous feathers on the breast are strong like scales. The head is also of a much darker blue than the back; and the white feathers on the chin and throat of an exquisite fine glossy texture, like the most beautiful satin.

GENUS XXIX. CERTHIA. CREEPER.

SPECIES I. *C. FAMILIARIS*.

BROWN CREEPER.

[Plate VIII. Fig. 1, Male.]

Little Brown variegated Creeper, BARTRAM, 289.*

THIS bird agrees so nearly with the common European Creeper (*Certhia familiaris*), that I have little doubt of their being one and the same species. I have examined, at different times, great numbers of these birds, and have endeavored to make a correct drawing of the male, that Europeans and others may judge for themselves; and the excellent artist to whom the plate was intrusted has done his part so well in the engraving, as to render the figure a perfect resemblance of the living original.

* We add the following synonyms: *Certhia familiaris*, LINN. *Syst.* ed. 10, vol. I., 118.—GMEL. *Syst.* I., 469.—LATH. *Ind. Orn.* 280.—*Le Grimpereau*, BUFF. *Pl. Enl.* 681.

The Brown Creeper is an extremely active and restless little bird. In winter it associates with the small Spotted Woodpecker, Nuthatch, Titmouse, &c., and often follows in their rear, gleaning up those insects which their more powerful bills had alarmed and exposed; for its own slender incurvated bill seems unequal to the task of penetrating into even the decayed wood, though it may enter into holes and behind scales of the bark. Of the Titmouse there are generally present the individuals of a whole family, and seldom more than one or two of the others. As the party advances through the woods, from tree to tree, our little gleaner seems to observe a good deal of regularity in his proceedings; for I have almost always observed that he alights on the body near the root of the tree, and directs his course with great nimbleness upwards to the higher branches, sometimes spirally, often in a direct line, moving rapidly and uniformly along, with his tail bent to the tree, and not in the hopping manner of the Woodpecker, whom he far surpasses in dexterity of climbing, running along the lower side of the horizontal branches with surprising ease. If any person be near when he alights, he is sure to keep the opposite side of the tree, moving round as he moves, so as to prevent him from getting more than a transient glimpse of him. The best method of outwitting him, if you are alone, is, as soon as he alights and disappears behind the trunk, take your stand behind an adjoining one, and keep a sharp lookout twenty or thirty feet up the body of the tree he is upon, for he generally mounts very regularly to a considerable height, examining the whole way as he advances. In a minute or two, hearing all still, he will make his appearance on one side or other of the tree, and give you an opportunity of observing him.

These birds are distributed over the whole United States; but are most numerous in the Western and Northern States, and particularly so in the depth of the forests, and in tracts of large timbered woods, where they usually breed; visiting the thicker settled parts of the country in fall and winter. They are more abundant in the flat woods of the lower district of New Jersey than in Pennsylvania; and are frequently found among the pines. Though their customary food appears to consist of those insects of the coleopterous class, yet I have frequently found in their stomachs the seeds of the pine-tree, and fragments of a species of fungus that vegetates in old wood, with generally a large proportion of gravel. There seems to be scarcely any difference between the colors and markings of the male and female. In the month of March I opened eleven of these birds, among whom were several females, as appeared by the clusters of minute eggs with which their ovaries were filled, and also several well-marked males, and, on the most careful comparison of their plumage, I could find little or no difference; the colors indeed were rather more vivid and intense in some

than in others; but sometimes this superiority belonged to a male, sometimes to a female, and appeared to be entirely owing to difference in age. I found, however, a remarkable and very striking difference in their sizes; some were considerably larger, and had the bill at least one-third longer and stronger than the others, and these I uniformly found to be males. I also received two of these birds from the country bordering on the Cayuga lake, in New York state, from a person who killed them from the tree in which they had their nest. The male of this pair had the bill of the same extraordinary size with several others I had examined before, the plumage in every respect the same. Other males, indeed, were found at the same time of the usual size. Whether this be only an accidental variety, or whether the male, when full grown, be naturally so much larger than the female (as is the case with many birds), and takes several years in arriving at his full size, I cannot positively determine, though I think the latter most probable.

The Brown Creeper builds his nest in the hollow trunk or branch of a tree, where the tree has been shivered, or a limb broken off, or where squirrels or Woodpeckers have wrought out an entrance: for nature has not provided him with the means of excavating one for himself. I have known the female begin to lay by the seventeenth of April. The eggs are usually seven, of a dull cinereous, marked with small dots of reddish yellow, and streaks of dark brown. The young come forth with great caution, creeping about long before they venture on wing. From the early season at which they begin to build, I have no doubts of their raising two broods during summer, as I have seen the old ones entering holes late in July.

The length of this bird is five inches, and nearly seven from the extremity of one wing to that of the other; the upper part of the head is of a deep brownish black; the back brown, and both streaked with white, the plumage of the latter being of a loose texture, with its filaments not adhering; the white is in the centre of every feather, and is skirted with brown; lower part of the back, rump, and tail-coverts, rusty brown, the last minutely tipped with whitish; the tail is as long as the body, of a light drab color, with the inner webs dusky, and consists of twelve quills each sloping off and tapering to a point in the manner of the Woodpeckers, but proportionably weaker in the shafts; in many specimens the tail was very slightly marked with transverse undulating waves of dusky, scarce observable; the two middle feathers the longest, the others on each side shortening by one-sixth of an inch to the outer one; the wing consists of nineteen feathers, the first an inch long, the fourth and fifth the longest, of a deep brownish black, and crossed about its middle with a curving band of rufous white, a quarter of an inch in breadth, marking ten of the quills; below this the quills are exteriorly edged to within a little of their tips with rufous

white, and tipped with white; the three secondaries next the body are dusky white on their inner webs, tipped on the exterior margin with white, and above that alternately streaked laterally with black and dull white; the greater and lesser wing-coverts are exteriorly tipped with white, the upper part of the exterior edges of the former rufous white; the line over the eye and whole lower parts are white, a little brownish toward the vent, but on the chin and throat pure, silky and glistening; the white curves inwards about the middle of the neck; the bill is half an inch long, slender, compressed sidewise, bending downwards, tapering to a point, dusky above and white below; the nostrils are oblong, half covered with a convex membrane, and without hairs or small feathers; the inside of the mouth is reddish; the tongue tapering gradually to a point, and horny towards the tip; the eye is dark hazel; the legs and feet a dirty clay color; the toes placed three before and one behind, the two outer ones connected with the middle one to the first joint; the claws rather paler, large, almost semicircular, and extremely sharp pointed; the hind claw the largest. The figure in the plate represents a male of the usual size in its exact proportions, and, but for the satisfaction of foreigners, might have rendered the whole of this prolix description unnecessary.

SPECIES II. *CERTHIA MACULATA*.*

BLACK AND WHITE CREEPER.

[Plate XIX. Fig. 3.]

EDWARDS, *pl.* 300.—*White poll Warbler*, *Arct. Zool.* 402, No. 293.—*Le figuier varié*, *BUFF.* v, 305.—*LATH.* II., 488.—*TURTON*, I., p. 603.

THIS nimble and expert little species seldom perches on the small twigs; but circumambulates the trunk, and larger branches, in quest of ants and other insects, with admirable dexterity. It arrives in Pennsylvania, from the south, about the twentieth of April, the young begin to fly early in July; and the whole tribe abandon the country about the beginning of October. Sloane describes this bird as an inhabitant of the West India Islands, where it probably winters. It was first figured by Edwards from a dried skin sent him by Mr. William Bartram, who gave it its present name. Succeeding naturalists have classed it with the warblers; a mistake which I have endeavored to rectify.

The genus of Creepers comprehends about thirty different species, many of which are richly adorned with gorgeous plumage; but, like

* Linnæus placed this bird in his genus *Motacilla*, and Latham arranged it in *Sylvia*. It does not belong to the genus *Certhia* as at present restricted.

their congenial tribe the Woodpeckers, few of them excel in song; their tongues seem better calculated for extracting noxious insects from the bark of trees, than for trilling out sprightly airs; as the hardened hands of the husbandman are better suited for clearing the forest or guiding the plough, than dancing among the keys of a forte-piano. Which of the two is the most honorable and useful employment is not difficult to determine. Let the farmer, therefore, respect this little bird for its useful qualities, in clearing his fruit and forest trees from destructive insects; though it cannot serenade him with its song.

The length of this species is five inches and a half, extent seven and a half; crown white, bordered on each side with a band of black, which is again bounded by a line of white passing over each eye, below this is a large spot of black covering the ear feathers; chin and throat black; wings the same, crossed transversely by two bars of white; breast and back streaked with black and white; tail, upper and also under coverts, black, edged and bordered with white; belly white; legs and feet dirty yellow; hind claw the longest, and all very sharp pointed; bill a little compressed sidewise, slightly curved, black above, paler below; tongue long, fine-pointed, and horny at the extremity. These last circumstances, joined to its manners, characterize it, decisively, as a creeper.

The female and young birds of the first year want the black on the throat, having that part of a grayish white.

SPECIES III. *CERTHIA CAROLINIANA*.*

GREAT CAROLINA WREN.

[Plate XII. Fig. 5.]

Le Roitelet de la Louisiane, Pl. Enl. 730, Fig. 1.—LATH. Syn. VII., p. 507, var. *B*.
—*Le Troglodytes de la Louisiane*, BUFF. Ois. V., p. 361.—*Motacilla Caroliniana*
(*regulus magnus*), BARTRAM, p. 291.†

THIS is another of those equivocal species that so often occur to puzzle the naturalist. The general appearance of this bird is such, that the most illiterate would at first sight call it a *Wren*; but the common Wren of Europe, and the Winter Wren of the United States, are both warblers, judging them according to the simple principle of Linnæus. The present species, however, and the following (the Marsh Wren),

* This and the two following species were placed by Latham in the genus *Sylvia*, whence they have been removed by Wilson, without, apparently, sufficient reason.

† We add the following synonyms: *Motacilla troglodytes*, var. γ GMEL. vol. I., p. 994.—*Sylvia ludoviciana*, LATH. Index Orn. sp. 150.

though possessing great family likeness to those above mentioned, are decisively *Creepers*, if the bill, the tongue, nostrils and claws are to be the criteria by which we are to class them.

The color of the plumage of birds is but an uncertain and inconstant guide; and though in some cases it serves to furnish a trivial or specific appellation, yet can never lead us to the generic one. I have, therefore, notwithstanding the general appearance of these birds, and the practice of former ornithologists, removed them to the genus *Certhia*, from that of *Motacilla*, where they have hitherto been placed.

This bird is frequently seen, early in May, along the shores of the Delaware, and other streams that fall into it on both sides, thirty or forty miles below Philadelphia; but is rather rare in Pennsylvania. This circumstance is a little extraordinary; since, from its size, and stout make, it would seem more capable of braving the rigors of a northern climate than any of the others. It can, however, scarcely be called migratory. In the depth of winter I found it numerous in Virginia along the shores and banks of the James river and its tributary streams, and thence as far south as Savannah. I also observed it on the banks of the Ogechee; it seemed to be particularly attached to the borders of cypress swamps, deep hollows, among piles of old decaying timber, and by rivers and small creeks. It has all the restless jerking manners of the Wrens, skipping about with great nimbleness, hopping into caves, and disappearing into holes and crevices like a rat, for several minutes, and then reappearing in another quarter. It occasionally utters a loud, strong, and singular twitter, resembling the word *chirrup*, dwelling long and strongly on the first syllable; and so loud that I at first mistook it for the Red-bird, *L. cardinalis*. It has also another chant, rather more musical, like "*Sweet William, Sweet William*," much softer than the former. Though I cannot positively say, from my own observations, that it builds in Pennsylvania, and have never yet been so fortunate as to find its nest; yet, from the circumstance of having several times observed it within a quarter of a mile of the Schuylkill, in the month of August, I have no doubt that some few breed here, and think it highly probable that Pennsylvania and New York may be the northern boundaries of their visits, having sought for it in vain among the states of New England. Its food appears to consist of those insects and their larvæ that frequent low damp caves, piles of dead timber, old roots, projecting banks of creeks, &c., &c. It certainly possesses the faculty of seeing in the dark better than day birds usually do; for I have observed it exploring the recesses of caves, where a good acute eye must have been necessary to enable it to distinguish its prey.

In the Southern States, as well as in Louisiana, this species is generally *resident*; though in summer they are more numerous, and are found rather farther north than in winter. In this last season their chirrup-

ing is frequently heard in gardens soon after daybreak, and along the borders of the great rivers of the Southern States, not far from the sea-coast.

The Great Wren of Carolina is five inches and a quarter long, and seven broad; the whole upper parts are reddish brown, the wings and tail being barred with black; a streak of yellowish white runs from the nostril over the eye, down the side of the neck, nearly to the back; below that a streak of reddish brown extends from the posterior part of the eye to the shoulder; the chin is yellowish white; the breast, sides and belly a light rust color, or reddish buff; vent feathers white, neatly barred with black; in the female plain; wing coverts minutely tipped with white; legs and feet flesh colored, and very strong; bill three-quarters of an inch long, strong, a little bent, grooved and pointed, the upper mandible bluish black, lower light blue; nostrils oval, partly covered with a prominent convex membrane; tongue pointed and slender; eyes hazel; tail cuneiform, the two exterior feathers on each side three quarters of an inch shorter, whitish on their exterior edges, and touched with deeper black; the same may be said of the three outer primaries. The female wants the white on the wing coverts; but differs little in color from the male.

In this species I have observed a circumstance common to the House and Winter Wren, but which is not found in the Marsh Wren; the feathers of the lower part of the back, when parted by the hand, or breath, appear spotted with white, being at bottom deep ash, reddish brown at the surface, and each feather with a spot of white between these two colors. This, however, cannot be perceived without parting the feathers.

SPECIES IV. *CERTHIA PALUSTRIS*.

MARSH WREN.

[Plate XII. Fig. 4.]

Motacilla palustris (*regulus minor*), BARTRAM, p. 291.

THIS obscure but spirited little species has been almost overlooked by the naturalists of Europe, as well as by those of its own country. The singular attitude in which it is represented will be recognised by those acquainted with its manners, as one of its most common and favorite ones, while skipping through among the reeds and rushes. The Marsh Wren arrives in Pennsylvania about the middle of May, or as soon as the reeds and a species of *Nymphaea*, usually called splatter-docks, which grow in great luxuriance along the tide water of our rivers, are sufficiently high to shelter it. To such places it almost wholly limits its excursions, seldom venturing far from the river. Its food consists of flying insects, and their larvæ, and a species of green grasshoppers that inhabit the reeds. As to its notes it would be mere burlesque to call them by the name of song. Standing on the reedy borders of the Schuylkill or Delaware, in the month of June, you hear a low crackling sound, something similar to that produced by air bubbles forcing their way through mud or boggy ground when trod upon; this is the *song* of the Marsh Wren. But as among the human race it is not given to one man to excel in everything, and yet each, perhaps, has something peculiarly his own; so among birds we find a like distribution of talents and peculiarities. The little bird now before us, if deficient and contemptible in singing, excels in the art of *design*, and constructs a nest, which, in durability, warmth and convenience, is scarcely inferior to one, and far superior to many, of its more musical brethren. This is formed outwardly of wet rushes mixed with mud, well intertwined, and fashioned into the form of a cocoa nut. A small hole is left two-thirds up, for entrance, the upper edge of which projects like a pent house over the lower, to prevent the admission of rain. The inside is lined with fine soft grass, and sometimes feathers; and the outside, when hardened by the sun, resists every kind of weather. This nest is generally suspended among the reeds, above the reach of the highest tides, and is tied so fast in every part to the surrounding reeds, as to bid defiance to the winds and the waves. The eggs are

usually six, of a dark fawn color, and very small. The young leave the nest about the twentieth of June, and they generally have a second brood in the same season.

The size, general color, and habit of this bird of erecting its tail, gives it, to a superficial observer, something of the appearance of the common House Wren, represented in Plate VIII. of this work; and still more that of the Winter Wren, figured in the same plate; but with the former of these it never associates; and the latter has left us some time before the Marsh Wren makes his appearance. About the middle of August they begin to go off, and on the first of September very few of them are to be seen. How far north the migrations of this species extend I am unable to say; none of them to my knowledge winter in Georgia, or any of the Southern States.

The Marsh Wren is five inches long, and six in extent; the whole upper parts are dark brown, except the upper part of the head, back of the neck, and middle of the back, which are black, the two last streaked with white; the tail is short, rounded, and barred with black; wings slightly barred; a broad strip of white passes over the eye half way down the neck; the sides of the neck are also mottled with touches of a light clay color on a whitish ground; whole under parts pure silvery white, except the vent, which is tinged with brown; the legs are light brown; the hind claw large, semicircular, and very sharp; bill slender, slightly bent; nostrils prominent; tongue narrow, very tapering, sharp pointed, and horny at the extremity; eye hazel. The female almost exactly resembles the male in plumage.

From the above description, and a view of the figure, the naturalist will perceive that this species is truly a *Certhia* or Creeper; and indeed its habits confirm this, as it is continually climbing along the stalks of reeds and other aquatic plants, in search of insects.

GENUS XXX. TROCHILUS. HUMMING BIRD.

SPECIES. *T. COLUBRIS.*

HUMMING BIRD.

[Plate X. Figs. 3, 4.]

Trochilus colubris. LINN. *Syst.* I., p. 191, No. 12.—*L' Oiseau mouche à gorge rouge de la Caroline*, BRISS. *Orn.* III., p. 716, No. 13, t. 36, fig. 6.—*Le Rubis*, BUFF. *Ois.* VI., p. 13.—*Humming Bird*, CATESB. *Car.* I., 65.—*Red-throated Humming Bird*, EDW. I., 38, male and female.—LATH. *Syn.* II., 769, No. 35.

NATURE in every department of her works seems to delight in variety; and the present subject of our history is almost as singular for its minuteness, beauty, want of song and manner of feeding, as the Mocking-bird is for unrivalled excellence of notes, and plainness of plumage. Though this interesting and beautiful genus of birds comprehends upwards of seventy species, all of which, with a very few exceptions, are natives of America and its adjacent islands, it is yet singular, that the species now before us should be the only one of its tribe that ever visits the territory of the United States.

According to the observations of my friend Mr. Abbot, of Savannah, in Georgia, who has been engaged these thirty years in collecting and drawing subjects of natural history in that part of the country, the Humming Bird makes its first appearance there, from the south, about the twenty-third of March; two weeks earlier than it does in the county of Burke, sixty miles higher up the country towards the interior; and at least five weeks sooner than it reaches this part of Pennsylvania. As it passes on to the northward as far as the interior of Canada, where it is seen in great numbers,* the wonder is excited how so feebly constructed and delicate a little creature can make its way over such extensive regions of lakes and forests, among so many enemies, all its superiors in strength and magnitude. But its very *minuteness*, the rapidity of its flight, which almost eludes the eye, and that admirable instinct, reason, or whatever else it may be called, and daring courage which Heaven has implanted in its bosom, are its guides and protectors. In these we may also perceive the reason, why an all-wise Providence has made this little hero an exception to a rule which prevails almost

* Mr. M'Kenzie speaks of seeing a "beautiful Humming Bird" near the head of the Unjigah or Peace river, in lat. 54°; but has not particularized the species.

universally through nature, viz., that the smallest species of a tribe are the most prolific. The Eagle lays one, sometimes two, eggs; the Crow five; the Titmouse seven or eight; the small European Wren fifteen; the Humming-bird *two*: and yet this latter is abundantly more numerous in America than the Wren is in Europe.

About the twenty-fifth of April, the Humming Bird usually arrives in Pennsylvania; and about the tenth of May begins to build its nest. This is generally fixed on the upper side of a horizontal branch, not among the twigs, but on the body of the branch itself. Yet I have known instances where it was attached by the side to an old moss-grown trunk; and others where it was fastened on a strong rank stalk, or weed, in the garden; but these cases are rare. In the woods it very often chooses a white oak sapling to build on; and in the orchard, or garden, selects a pear-tree for that purpose. The branch is seldom more than ten feet from the ground. The nest is about an inch in diameter, and as much in depth. A very complete one is now lying before me, and the materials of which it is composed are as follows:—The outward coat is formed of small pieces of a species of bluish gray lichen that vegetates on old trees and fences, thickly glued on with the saliva of the bird, giving firmness and consistency to the whole, as well as keeping out moisture. Within this are thick matted layers of the fine wings of certain flying seeds, closely laid together; and, lastly, the downy substance from the great mullein, and from the stalks of the common fern, lines the whole. The base of the nest is continued round the stem of the branch, to which it closely adheres; and, when viewed from below, appears a mere mossy knot or accidental protuberance. The eggs are two, pure white and of equal thickness at both ends. The nest and eggs in the plate were copied with great precision and by actual measurement, from one just taken in from the woods. On a person's approaching their nest, the little proprietors dart around with a humming sound, passing frequently within a few inches of one's head; and should the young be newly hatched, the female will resume her place on the nest even while you stand within a yard or two of the spot. The precise period of incubation I am unable to give; but the young are in the habit, a short time before they leave the nest, of thrusting their bills into the mouths of their parents, and sucking what they have brought them. I never could perceive that they carried them any animal food; though, from circumstances that will presently be mentioned, I think it highly probable they do. As I have found their nests with eggs so late as the twelfth of July, I do not doubt but that they frequently, and perhaps usually, raise two broods in the same season.

The Humming Bird is extremely fond of tubular flowers, and I have

often stopped, with pleasure, to observe his manœuvres among the blossoms of the trumpet flower. When arrived before a thicket of these that are full blown, he poises, or suspends himself on wing, for the space of two or three seconds, so steadily, that his wings become invisible, or only like a mist; and you can plainly distinguish the pupil of his eye looking round with great quickness and circumspection; the glossy golden green of his back, and the fire of his throat, dazzling in the sun, form altogether a most interesting appearance. The position into which his body is usually thrown while in the act of thrusting his slender tubular tongue into the flower, to extract its sweets, is exhibited in the figure on the plate. When he alights, which is frequently, he always prefers the small dead twigs of a tree, or bush, where he dresses and arranges his plumage with great dexterity. His only note is a single chirp, not louder than that of a small cricket or grasshopper, generally uttered while passing from flower to flower, or when engaged in fight with his fellows; for when two males meet at the same bush, or flower, a battle instantly takes place; and the combatants ascend in the air, chirping, darting and circling round each other, till the eye is no longer able to follow them. The conqueror, however, generally returns to the place to reap the fruits of his victory. I have seen him attack, and for a few moments tease the King Bird; and have also seen him in his turn, assaulted by a humble-bee, which he soon put to flight. He is one of those few birds that are universally beloved; and amidst the sweet dewy serenity of a summer's morning, his appearance among the arbors of honeysuckles, and beds of flowers, is truly interesting.

When morning dawns, and the blest sun, again
 Lifts his red glories from the Eastern main,
 Then through our woodbines, wet with glittering dews,
 The flower-fed Humming-bird his round pursues;
 Sips with inserted tube, the honeyed blooms,
 And chirps his gratitude as round he roams;
 While richest roses, though in crimson drest,
 Shrink from the splendor of his gorgeous breast;
 What heav'nly tints in mingling radiance fly!
 Each rapid movement gives a different dye;
 Like scales of burnished gold they dazzling show,
 Now sink to shade—now like a furnace glow!

The singularity of this little bird has induced many persons to attempt to raise them from the nest, and accustom them to the cage. Mr. Coffey, of Fairfax county, Virginia, a gentleman who has paid great attention to the manners and peculiarities of our native birds, told me, that he raised and kept two, for some months, in a cage; supplying them with honey dissolved in water, on which they readily fed. As the sweetness

of the liquid frequently brought small flies and gnats about the cage, and cup, the birds amused themselves by snapping at them on wing, and swallowing them with eagerness, so that these insects formed no inconsiderable part of their food. Mr. Charles Wilson Peale, proprietor of the Museum, tells me, that he had two young Humming Birds which he raised from the nest. They used to fly about the rooms; and would frequently perch on Mrs. Peale's shoulder to be fed. When the sun shone strongly into the chamber, he has observed them darting after the motes that floated in the light, as Flycatchers would after flies. In the summer of 1803 a nest of young Humming Birds was brought me, that were nearly fit to fly. One of them actually flew out by the window the same evening, and falling against a wall, was killed. The other refused food, and the next morning I could but just perceive that it had life. A lady in the house undertook to be its nurse, placed it in her bosom, and as it began to revive, dissolved a little sugar in her mouth, into which she thrust its bill, and it sucked with great avidity. In this manner it was brought up until fit for the cage. I kept it upwards of three months, supplied it with loaf sugar dissolved in water which it preferred to honey and water, gave it fresh flowers every morning sprinkled with the liquid, and surrounded the space in which I kept it with gauze, that it might not injure itself. It appeared gay, active, and full of spirit, hovering from flower to flower as if in its native wilds, and always expressed by its motions and chirping, great pleasure at seeing fresh flowers introduced to its cage. Numbers of people visited it from motives of curiosity, and I took every precaution to preserve it, if possible, through the winter. Unfortunately, however, by some means it got at large, and, flying about the room, so injured itself that it soon after died.

This little bird is extremely susceptible of cold, and if long deprived of the animating influence of the sunbeams, droops and soon dies. A very beautiful male was brought me this season, which I put into a wire cage, and placed in a retired shaded part of the room. After fluttering about for some time, the weather being uncommonly cool, it clung by the wires, and hung in a seemingly torpid state for a whole forenoon. No motion whatever of the lungs could be perceived, on the closest inspection, though at other times this is remarkably observable; the eyes were shut; and when touched by the finger it gave no signs of life or motion. I carried it out to the open air, and placed it directly in the rays of the sun, in a sheltered situation. In a few seconds respiration became very apparent; the bird breathed faster and faster, opened its eyes, and began to look about, with as much seeming vivacity as ever. After it had completely recovered, I restored it to liberty; and it flew off to the withered top of a pear tree, where it sat for

some time dressing its disordered plumage, and then shot off like a meteor.

The flight of the Humming Bird from flower to flower, greatly resembles that of a bee, but is so much more rapid, that the latter appears a mere loiterer to him. He poises himself on wing, while he thrusts his long slender tubular tongue into the flowers in search of food. He sometimes enters a room by the window, examines the bouquets of flowers, and passes out by the opposite door or window. He has been known to take refuge in a hot-house during the cool nights of autumn; to go regularly out in the morning, and to return as regularly in the evening, for several days together.

The Humming Bird has, hitherto, been supposed to subsist altogether on the honey, or liquid sweets, which it extracts from flowers. One or two curious observers have indeed remarked, that they have found evident fragments of insects in the stomach of this species; but these have been generally believed to have been taken in by accident. The few opportunities which Europeans have to determine this point by observations made on the living bird, or by dissection of the newly-killed one, have rendered this mistaken opinion almost general in Europe. For myself I can speak decisively on this subject. I have seen the Humming Bird for half an hour at a time darting at those little groups of insects that dance in the air in a fine summer evening, retiring to an adjoining twig to rest, and renewing the attack with a dexterity that sets all our other Flycatchers at defiance. I have opened from time to time great numbers of these birds; have examined the contents of the stomach with suitable glasses, and in three cases out of four, have found these to consist of broken fragments of insects. In many subjects entire insects of the coleopterous class, but very small, were found unbroken. The observations of Mr. Coffey as detailed above, and the remarks of my worthy friend Mr. Peale, are corroborative of these facts. It is well known that the Humming Bird is particularly fond of tubular flowers where numerous small insects of this kind resort to feed on the farina, &c., and there is every reason for believing that he is as often in search of these insects as of honey; and that the former compose at least as great a portion of his usual sustenance as the latter. If this food be so necessary for the parents there is no doubt but the young also occasionally partake of it.

To enumerate all the flowers of which this little bird is fond, would be to repeat the names of half our American Flora. From the blossoms of the towering poplar, or tulip tree, through a thousand intermediate flowers to those of the humble larkspur, he ranges at will, and almost incessantly. Every period of the season produces a fresh multitude of new favorites. Towards the month of September there is a

yellow flower which grows in great luxuriance along the sides of creeks and rivers, and in low moist situations ; it grows to the height of two or three feet, and the flower which is about the size of a thimble, hangs in the shape of a cap of liberty above a luxuriant growth of green leaves. It is the *Balsamina noli me tangere* of botanists, and is the greatest favorite with the Humming Bird of all our other flowers. In some places where these plants abound you may see at one time ten or twelve Humming Birds darting about, and fighting with and pursuing each other. About the twentieth of September they generally retire to the south. I have, indeed, sometimes seen a solitary individual on the twenty-eighth and thirtieth of that month, and sometimes even in October ; but these cases are rare. About the beginning of November they pass the southern boundary of the United States into Florida.

The Humming Bird is three inches and a half in length, and four and a quarter in extent ; the whole back, upper part of the neck, sides under the wings, tail coverts, and two middle feathers of the tail, are of a rich golden green ; the tail is forked, and, as well as the wings, of a deep brownish purple ; the bill and eyes are black ; the legs and feet, both of which are extremely small, are also black ; the bill is straight, very slender, a little inflated at the tip, and very incompetent to the exploit of penetrating the tough sinewy side of a crow, and precipitating it from the clouds to the earth, as Charlevoix would persuade his readers to believe.* The nostrils are two small oblong slits, situated at the base of the upper mandible, scarcely perceivable when the bird is dead, though very distinguishable and prominent when living ; the sides of the belly and belly itself dusky white, mixed with green ; but what constitutes the chief ornament of this little bird, is the splendor of the feathers of his throat, which when placed in a proper position, glow with all the brilliancy of the ruby. These feathers are of singular strength and texture, lying close together like scales, and vary when moved before the eye from a deep black to a fiery crimson and burning orange. The female is destitute of this ornament ; but differs little in other appearance from the male ; her tail is tipped with white, and the whole lower parts are of the same tint. The young birds of the first season, both male and female, have the tail tipped with white, and the whole lower parts nearly white ; in the month of September the ornamental feathers on the throat of the young males begin to appear.

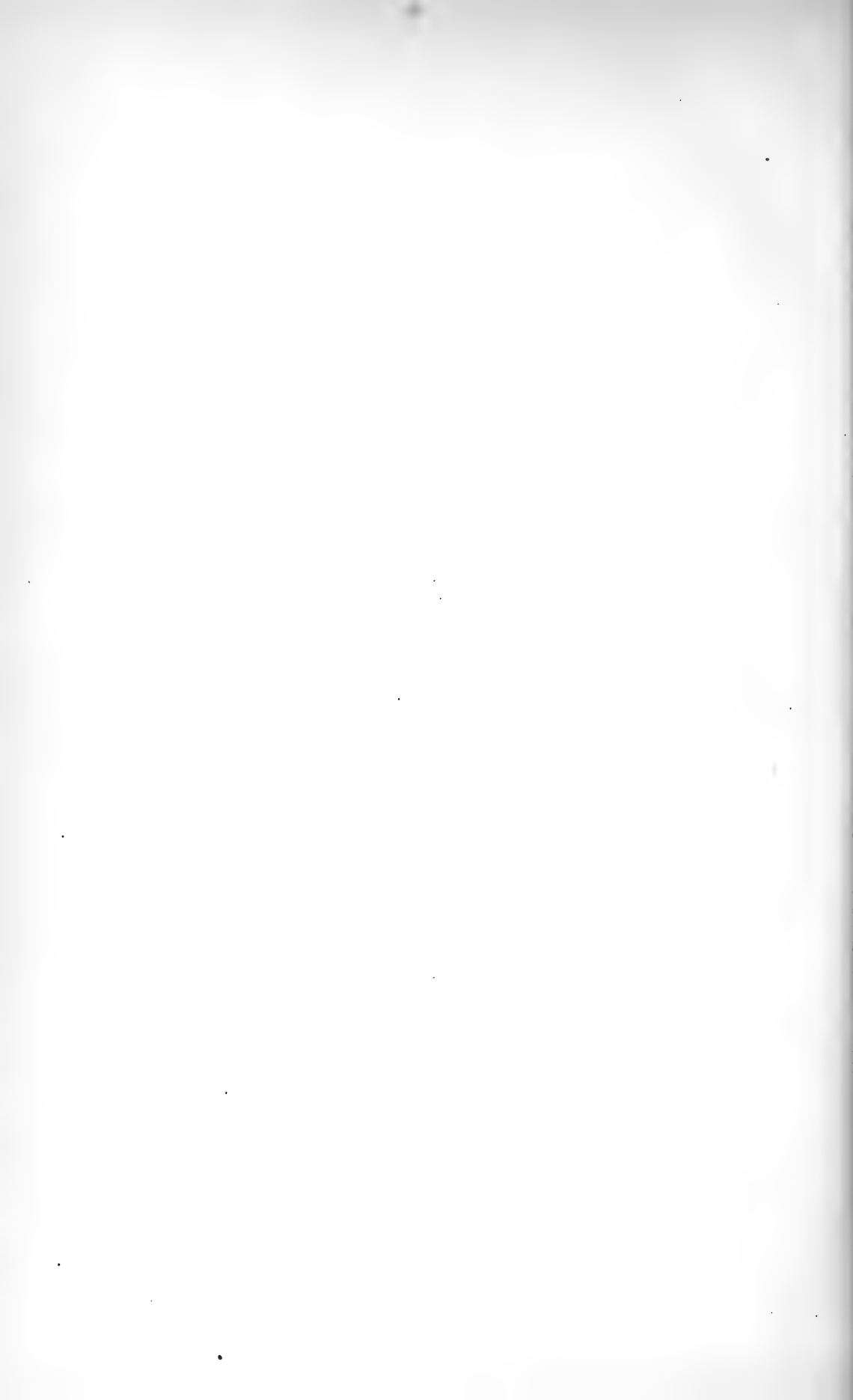
On dissection the heart was found to be remarkably large, nearly as big as the cranium ; and the stomach, though distended with food, uncommonly small, not exceeding the globe of the eye, and scarcely more than one-sixth part as large as the heart ; the fibres of the last

* Hist. de la Nov. France, III., p. 185.

were also exceedingly strong. The brain was in large quantity, and very thin; the tongue, from the tip to an extent equal with the length of the bill, was perforated, forming two closely attached parallel and cylindrical tubes; the other extremities of the tongue corresponded exactly to those of the Woodpecker, passing up the hind head, and reaching to the base of the upper mandible. These observations were verified in five different subjects, all of whose stomachs contained fragments of insects, and some of them whole ones.

END OF VOL. I.







SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00027639 4

nhbird QL681 W74 1871?
v. 1 American ornithology